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Addresses

THE AMERICAN MEDICAL ASSOCIATION, ITS AIMS AND INTERESTS.

PRESIDENT'S ADDRESS AT THE FIFTY-EIGHTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION AT ATLANTIC CITY, N. J., JUNE 4-7, 1907.

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NEW YORK CITY.

The fifty-eighth consecutive session of the American Medical Association is now at hand. Those members whom you kindly honored one year ago with your confidence in official station are now before you in token of their loyalty to your undertakings and of their obedience to your behests. These annual conferences are of prodigious moment to the entire medical profession and to the country at large; they serve to broaden the scope of general understanding; they extend the sphere and increase the vigor of professional fellowship and of healthy civic brotherhood, and they correspondingly elevate the station of our calling in the appreciation of thoughtful right-minded people everywhere in the land. Who of us was not made a better physician because of the visit to Boston a year ago? Who of us, then inspired by patriotic emotions, aroused by the memorable examples so abundantly at hand, did not again renew unalterable allegiance to the perpetuity of his country? In whom of us was not incited a higher fraternal sentiment by the warm grasps of fellowship which, while inviting delay a bit, everywhere urged us on to a completed hospitality?

Again, for the third time in the dawn of the twentieth century, we find ourselves in the warm embraces of the hospitable people of Atlantic City. Its wealth of sunshine and cheer, its pure and invigorating eastern breezes, and the joyous acclaim of its citizens assure us that we are in "honest waters which ne'er left man i' the mire," and, therefore, we feel entirely secure and correspondingly happy. We who before never yielded to subtle solicitation or to pressing demand now acknowledge that we have the Atlantic City "habit," and we refuse all treatment except that founded on the therapeutic virtue of the hair of the canine that inflicted the delightful traumatism! In the presence of such a felicitous environment as this, who is there among us who would be so thoughtless, or who could be so unfeeling, as to countenance a trifling with the sense of justice by individual favor, or of commendable desire by vain objection?

In looking about for a topic on which to base my allotted remarks on this occasion, I am, perhaps, unduly impressed with the idea that impersonal open-hearted introspection might not be amiss at this period of the Association.

In this bearing I refer more especially, 1, to the organizing of the medical profession of the country and its potential perplexities; 2, to the elevating of the standard of medical education and its possible afflictions, and, 3, to the urgent demand for trustworthy medicinal means and of sincerer efforts on the part of every physician in securing a betterment of therapeutic methods.

Equity, consequent power and the durability of human designs are the legitimate assets of wisely conceived organization. Power and durability, not thus sustained, are of uncertain tenure and organization resting thereon can be likened to a house of blocks tethered with ropes of sand. And it should be recognized at all times that the virile activities of the principles of human justice are wonderfully potent in all organized bodies of mankind.

THE OBJECT OF THE ASSOCIATION.

It is of great moment that this Association has (as set forth in its constitution) but one significant object in view, viz., "The Promotion of the Science and Art of Medicine." And it is purposed in attaining this end "to unite into one compact organization the medical profession of the United States," in order to foster "the growth and diffusion of medical knowledge;" to promote "friendly intercourse among American physicians;" to safeguard "the material interests of the medical profession;" to elevate "the standard of medical education;" to secure "the enactment and enforcement of just medical laws;" to enlighten and direct "public opinion" regarding the "broad problems of hygiene," and to present "to the world the practical accomplishments of scientific medicine."

It follows, therefore, that the promotion of the science and art of medicine as provided by the constitution of the Association is, in effect, the promotion of the methods and the development of the means and the opportunities for relieving human suffering and thereby the adding of years and comfort to human existence. And true it is that to no class of persons is fraternal spirit and vigilant cooperation so essential as to those who are engaged in combating the insidious and tireless encroachments of the agents of human affliction and in relieving the abundant miseries which they beget. A transcendent service like this should be sheltered by the zeal of healthful personal and professional devotion and in no way depleted by the wiles of business ambitions. Those who regard the practice of medicine as a business enterprise should class themselves as brokers in a market of human affliction. To those who would infect the sound spirit of professional devotion and fellowship with the virus of sordid gain little heed need be given at the counsels of thoughtful men in the ranks of a beneficent profession.

The uniting of the medical profession of the United States into "one compact organization," making to the wise purposes already stated, is progressing in a decided manner, guided by the earnest activity and abundant experience of Dr. J. N. McCormack, of Kentucky. Al-

ready the constituent members of the organization number nearly 65,000, of which the fully constituted members are about 27,000, showing a substantial increase of the former class during the present year of about 10 plus per cent. and of the latter about 12.5 per cent. And when it is recalled that the regular medical profession of the United States numbers about 112,000 it is not difficult to understand that in the near future the medical profession of these states might easily be united into one compact organization. But how compact it may be and how enduring it may become will depend on the degree of wisdom exercised by its builders and on the measure of justice dispensed by those in control of its affairs.

"Justice without wisdom is impossible," said Froude. "Wisdom is only truth," said Goethe. Therefore, justice and truth are inseparable, say we all. The search for truth and understanding is the inherent right of all men, and they who inhibit the effort are for some reason (or pretext) opposed to justice and to knowledge. Obviously the consensus of men of widely separated habitation, of differently constituted environment and opinion, is a wiser and a safer guide in the conduct of important and comprehensive human affairs than is the consensus of men of contiguous localities. The judgment of the former class represents the concentrated wisdom of the whole, of the latter only that of a part of the country. The principle of utterance or of action relating to matters of common interest and general effect in organized bodies, should in all cases be known and approved and be coordinated through the deliberate wisdom of broad constituted authority, rather than by the anxious thought or the hasty vocabulary of a few persons, no matter how experienced they may be or how wise they may be regarded as being. History not infrequently has demonstrated by untoward results the need of this rule of action in governmental and in other human affairs.

The lamented Lincoln emphasized the importance of this principle in no uncertain manner by the famous utterance, "The government of the people, by the people, for the people, shall not perish from the earth."

And in this relation it is well for us to keep in mind that a failure on the part of the responsible many, to plan and coordinate wisely the official acts of the few, often renders effeminate and inoperative the subsequent inhibitory efforts of those in established control.

Among the inspiring benefits provided by the constitution of this Association, is embraced the fostering of the growth and the diffusing of medical knowledge and its beneficence, throughout the various channels of human intercourse. The promoting of the growth and the diffusing of medical knowledge should appeal with equal vigor to the people who experience relief and to those who contribute the products of medical enlightenment.

Every physician can contribute a definite share to the healthy growth and wise diffusion of medical knowledge and to its bounties. Those who strive in the workshops of medicine, the laboratories and the hospitals, more especially the former, have already bestowed a bountiful portion toward the attainment of this end. Scientific laboratory deductions, however, could not be regarded as final; they yet required the leavening proof from out the complex laboratory of the human body, as demonstrated by practical applications in the treatment of disease, to establish their worth. To the general and to the hospital practitioners of medicine belonged the duty of dispensing the fruits of laboratory research, and thus far so well has concurrent effort accomplished its purpose, that life's expectancy during the first forty years of existence has been advanced quite 30 per cent. But following this period only a little advance in this regard has yet been made, and principally because of the differences in the nature of the diseases which afflict those of the earlier and of the later periods of life.

The present and prospective civil worth of the toll levied by disease on the wisdom and experience of mankind, during the later period of life can not well be estimated. But the physical sufferings of this period are largely the characteristic outcome of its peculiar diseases, many of which might be prevented and perhaps cured by means of progressive investigation and therapy related to a full term of years, and thus life's span become yet longer extended.

As just observed, every physician, if he will, can contribute a definite share to this pre-eminent undertaking. The opportunities of the country practitioner in this regard are of special significance, because of the knowledge gained through the differing effects of environment on the diseases of country and urban patients. Painstaking cooperative effort directed to the solution of the problems of disease can be made wherever two or more physicians are in mutual contact with each other and shall undertake the task.

ENDOWMENTS FOR MEDICAL EDUCATION.

It can not be gainsaid that the comparatively few of the people constituting the medical profession of this country are tireless in their efforts to advance the scientific and practical status of medical knowledge. But what can be said regarding the great multitude of others of the people, referable to mutual response commensurate with the earthly blessings which they receive? As an earnest of the sentiments of those persons who give bountifully to beneficent ends, I quote from a comprehensive address delivered by President Keen at the annual session of this Association, held here in June, 1900, and based on the United Education Report of 1898. President Keen presented to the audience the following startling facts regarding the comparative endowments bestowed on theological and medical schools for teaching (not foundation) purposes in this country. It was shown that each of the 8,000 theological students had the income of $2,250 provided for his instruction, and that each of the 24,000 medical students had the income of $83 provided for the same purpose. Also that of the 178 endowed chairs in teaching, only five related to medicine. Then we were solaced by the thought, "A hard beginning maketh a good ending."

In this address President Keen gave as his opinion that the difference in the amounts of these endowments was chiefly in consequence of the "vicious methods of the conduct of medical teaching as represented in preparatory medical schools." And it is fair to say that many others were of the same opinion. In view of this hypothesis, and of the fact that since the time of the report on which it was based up to the final one[1] of five years later, and notwithstanding that distinct improvement in the administration and the teaching in medical colleges had taken place, and broader laboratory avenues of well-known scientific outcome were in operation,

1. Commission of Education, Department of the Interior, 1903-4, II.

still it does not appear that a sufficient rising in the tide of advancement was reached to influence satisfactorily the inclination of munificent givers. For, according to the report of 1903-4, each of the 7,400 theological students of 1904 had the income of $3,031 provided for his instruction, and each of the 27,000 medical students of that year had the income of $54 provided for the same purpose, thus showing a gain over the previous report in favor of the theological student of $781 per capita, and a loss to the medical student of $29 per capita, for teaching purposes.

Substantially the benefit of $22,500,000 was available for the purposes of theological education, as against the benefit of $1,450,000 for medical educational use at the time of the report of 1903. At this time, of the 153 theological schools 77 report endowments and 76 report no endowments. And of the 152 medical schools 19 report endowments and 133 report no endowments. Also five of the theological schools had endowments varying in amount from $853,000 to $1,525,388 each. Now, more than ever, are we impressed with the force of another expression, "Help yourself and Heaven will help you."

In view of this later increase in the difference of the incomes bestowed for direct educational purposes, and under improved medical conditions, it seems very likely that opposing factors, more potent than first assigned, are extant. When, however, it shall happen that bountiful givers regard us in health as in acute affliction, perhaps greater heed will be given to the wisdom of making larger medical educational gifts. Irreverent comment has hinted of another compelling influence, especially related to generous adult minds, embodying the notion that the hope and faith of celestial expectancy, are more attractive than are the faith and outcome of terrestial realization. Whatever may be the reason for the continued paucity of medical endowment, I am not prepared to say, but I hope that substantial improvement will be secured through the convincing influence of beneficent subjective and objective lessons, patiently, discreetly and thoughtfully impressed by us on the public mind. Yet, confronting this hope, there appears an ominous specter pointing to the fact that only by laborious effort, chiefly supported by the medical profession, were the memory and brilliant services of the late Dr. Walter Reed meagerly characterized. Those who experienced the greatest blessings because of them gave the least to the care of those whom he loved most.

The simple, common-place remark, "the promoting of friendly intercourse among American physicians," I regard as the most important announcement set forth in the opening declaration of the constitution of the Association, looking to the "Promotion of the Science and Art of Medicine." For, without the stimulating and guiding support of professional good-fellowship in all the term implies, discord and discredit are likely to delay or cripple the realization of this one great object in view.

THE JOURNAL.

I know of no agent so well fitted to contribute to the fostering of the growth and the diffusing of medical knowledge and the promoting of friendly intercourse among American physicians as rightly falls to the lot of THE JOURNAL of the American Medical Association. A journal with a weekly circulation of over 50,000 and accounted as the utterance of many more than this number of the organized medical profession of the country, may well be regarded in things of professional concern, as the voice of the multitude proclaiming its will. Therefore, it is important that the tone and wisdom of its speech be in accord with the judgment of the great majority of our profession. I am inclined to believe that when the pages of our journal are the forum of temperate and instructive discussion of the policies of common interest to our membership greater impetus will be given to just causes and a broader scope to fraternal comfort among American physicians. One, however, can not be reminded of THE JOURNAL without being impressed by the creative ability, the abiding energy and overtaxed assent of the editor, the Secretary of this Association.

I am deeply impressed with the belief that at this time the greatest danger to continued harmonious unity in the Association lies ill-hidden in the constituted expression, "to safeguard the material interests of the medical profession." It requires no special discriminating sense to foresee the devious interpretations which eager desire might willingly give to the phraseology of this declaration. Fortunately, however, no rendering of the language of this expression can be properly entertained which conflicts with that of the antecedent one, "the promotion of friendly intercourse among American physicians." However this may be, the following suggestive lines of Froude should not be overlooked: "Where all are selfish the sage is no better than the fool, and only rather more dangerous."

THE WAR AGAINST DISEASE.

The genuine products of completed organization of the medical profession are of infinite importance to the well-being of the country. The potent factors of common prosperity will be encouraged and protected; the hearts and homes of the well-to-do and the hopes and hovels of the needy will each reflect in joyous ways, the benefits of cooperative action in fixing the nature, overcoming the causes and lessening the burdens of disease. The war now under way against cancer and tuberculosis, two of the insatiable inflictions of humanity, can, along with that opposing ophthalmia, be waged with comprehensive rational designs and improved prospective results.

The broader the field of opportunity in this regard, and the greater the activity of the contest, the more bounteous will be the return and the greater a final victory. When, for instance, it is recalled that for unknown reasons the death rate from cancer is slowly advancing in spite of intelligent, earnest opposition; that acquired tuberculosis yet adds 13 per cent. to the total death rate; that unrestrained ophthalmia causes over 25 per cent. of the blindness from disease; that over 30 per cent. of the school children of New York, and perhaps of other large cities, suffer from defective vision, and that in 75 per cent. is their mentality impaired by causes yielding to curative measures of a simple and permanent nature, then, indeed, is the necessity for united action relating to control of human infliction emphatically demonstrated.

The alleviation and cure of such afflictions serve to lighten the burdens of public care, to lessen the tenantry of charitable and penal institutions and to lay the foundation of good citizenship.

A NATIONAL BOARD OF HEALTH.

The fact that communicable disease has no boundary restraints in the presence of unguarded human pursuits is quite as familiar to the lay as to the medical

mind. Also that human indifference and human ignorance and established sectional state policy often contribute an unfortunate share to human distress is well known to the medical profession. It would seem wise, therefore, that interstate sanitary regulations should be established, thus affording even-handed opportunity of protecting interstate enterprise from the effects of concurrent disease. Duties of this nature and others of national sanitary importance can be properly met when an awakened sense of the need on the part of those controlling the affairs of the country shall invite the cooperation of our profession looking to the acquiring and preserving the best results, which wise statesmanship and wise sanitation can jointly secure.

A national board of health having in charge such things as properly fall under its consideration and action would be a national blessing of ever-increasing importance. But in this relation candor compels me to state that I find little encouragement for those of our profession who at the outset would demand a seat in the executive council at the head of the nation as an acknowledgment of professional capacity, or as a retainer for prospective service. Instead we and others laboring in mercy's cause should be willing to serve in allotted capacity as Jacob served for Rachel, with unostentatious patience, tinctured perhaps with cruel disappointment, but leaving the results of our labors as an earnest of our worth and of the reward which best befits it.

Not a little has been said in the near past regarding the possibility of securing national incorporation of the American Medical Association, with power to hold property and transact business anywhere in the United States. The gaining of such incorporation is no longer speculative, for within the last year several charters of similar scope to that framed by Judge Ray for us have been secured for other organizations. I am inclined, however, to hesitate in recommending a renewal of endeavor in this respect until assurance can be had of earnest, genuine effort on the part of all, looking to the securing of incorporation and also cooperation in the adjustment of the business matters essential to a completed consummation of the act. A policy which would contemplate the locating of the business affairs of the Association at Washington in the event of incorporation, I regard as hostile to the best interests of the profession and contributive to the impairment of fraternal peace.

MEDICAL LEGISLATION.

The enactment and enforcement of just medical laws is a matter of superlative importance. Fair and equitable relations, founded on uniform standards, should be established between the respective states regarding the requirements of medical education. Under this arrangement, fully qualified physicians going from one state to another would not be obliged to submit to annoying state board scrutiny concerning fitness to practice medicine. Since no unusual professional attainments are necessary to meet the exigencies of practice in any state of the Union, but little difficulty should be experienced in establishing a grade of educational requirement, permitting of practice through reciprocal comity.

The unwelcome thought arises at this time that, in the absence of equitable state reciprocity, one or more states not blessed with first-class educational opportunities might endeavor to protect their own interests against the professional encroachments of the graduates of first-class medical schools by requirements to practice of such character as not to merit serious thought on the part of the faculties of highly reputable medical institutions. It is difficult, however, to conceive that this idea can be more than a passing fancy, for how a course of this kind could receive the sanction of good judgment is not easily understood. Relative to competent practitioners of long standing who may desire to change their state environment, a greater difficulty attends a proper adjustment of their situation. It seems to me, however, that common justice requires that a form of examination should be given in these instances, which in its scope is measured by practical methods consistent with the experience of the applicant, rather than by one of modern requirement. For I am quite certain that if a member of the teaching faculty of a modern medical school were unexpectedly to find himself outside the halls of his own institution, a creditable return through the enlightened channels prescribed by his catalogues for students, would be shadowed with great doubt and probably attended with humiliating disaster.

MEDICAL EDUCATION.

Beneath this opinion lies a thought pregnant with important professional responsibility relating to all those who have to do with regulating the requirements to begin the study of medicine. Should it occur to them that ideals may not everywhere be needed and that the object might be to meet the requirements of the whole country—a country yet comparatively new in professional opportunities and rewards for ambitious young men in a great part of its area? Should it occur to them that the coming into the field of action of vast business enterprises has begotten corresponding opportunities attended with less preparatory drudgery and expense and by greater prospective rewards than generally attend the practice of medicine? Ought they to keep in mind that the increase in educational requirements above a certain point has not resulted, at least in New York State, in a corresponding increase in medicine of those of the highest qualifications, but instead their comparative numerical status (21 plus per cent.) in this and in other common respects has remained practically unchanged for the last ten years? Is it not possible, therefore, that many worthy and able young men who are less favored than their fellows have sidestepped because of the comparative hardships imposed by educational requirements and the uncertain and delayed rewards that attend earnest endeavor in the medical profession?

Whether or not the standard of medical education should soon be raised in this country to equal that of the Old World is a matter concerning which honest differences of opinion are earnestly pronounced. While no one can consistently contend that knowledge is not power, yet the adjustment of more than a requisite amount of knowledge in the practice of medicine, to the sparse occupancy of many broad areas of this country is a matter which for some time to come may concern the stern power of economics more than the needs of ideal culture. Possibly, therefore, those who are blessed with commendable professional dignity and with pleasing remunerative environment might willingly pause for a time while giving thought to the demands for professional care in broad necessitous surroundings.

The analytic work being done by the Council on Medical Education is mercilessly disclosing the comparative *status* of the medical schools in this country, to the discredit of many heretofore differently regarded. The active manner in which the labor is carried on under the chairmanship of Dr. Arthur D. Bevan is creditable to

the committee and to the cause in hand. Inasmuch as the standard of suitable preparatory medical attainment depends more on the capacity of a faculty to impart knowledge and beget character than it does on the phraseology of the curriculum, the outcome of the committee's efforts is being watched with solicitous interest by all concerned in honest standards of moral and medical qualifications.

Apropos of the importance that the faculties of medical schools should lead the way to higher station in professional ethical conduct, both by precept and example, I am prompted to say that there appears to be no doubt that uncanny business instincts are encroaching in the reciprocal vulgar ways characteristic of lay methods not a little on the sacred domain of professional propriety. I am of the opinion that trespasses of this kind are chiefly the outcome of acquisitive intentions based on delusive self-seeking desires. The remedy for the cure of this unprofessional propensity rests largely in the hands of the faculties of medical schools. They should inculcate a high sense of professional honor in those who come under their tutelage. Ample instruction of medical students in the tenets of moral philosophy, as applied to the practice of medicine, and substantial disapprobation of offending practitioners by their colleagues will, in my judgment, hasten the reduction of this evil to a minimum.

In this glorious country of ours, "the will of the people is the law of the land." And in this bearing it is needful that we should act with good sense concerning our personnel in all matters which are of special interest to the commonality, so as not to encounter the adverse activity of popular desire. In this connection it is important to know that in the United States there are about 84,000,000 people, the great majority of whom are capable of satisfactorily judging of the practical things of life relating to themselves as they come into thought. Also in the United States there are about 112,000 physicians who are eligible to membership in the American Medical Association, but of which as yet little more than one-half are affiliated in any capacity with the organization. It logically follows, therefore, that a judicious estimate should be made of how the great majority of the 84,000,000 of people plus nearly half of our own calling would regard our intentions before venturing at all rather than prematurely to court defeat and corresponding loss of station. The question is *not* altogether what we think of ourselves and our causes, but the question *is* how we ourselves and our causes may be regarded by the people concerned and by their friends, to say nothing of the balance of our own profession. And, too, it should be kept in mind that it is not likely that general mutual accord will prevail in all matters of common interest which arise in organized bodies of men. In a humane profession appeals should be made to judgment, not to passion or prejudice. It is within the easy recollection of most of us that sturdy efforts were made by the united medical profession of a state in what was regarded to be a justifiable cause. Yet, as it appears, decided defeat was the outcome, because the majority of the interested people were not in harmony with the contention. This suggestive lesson should not pass unheeded, if experience and good judgment are to become available assets in the conduct of the affairs of medical organization.

THE NEED OF HONEST DRUGS.

It is written that Oliver Cromwell, while fording a river with his army to attack the enemy, exclaimed, "Put your trust in God, but mind to keep your powder dry!" No less determined than Cromwell was, do many physicians now feel on account of the fact that their figurative powder (drugs) is quite apt to be worse than wet, being alarmingly defective in quality and fickle in strength. As an illustration of these facts, no evidence more convincing can be presented than that of the Health Department of New York City. This efficient department has for some time labored with discreet energy and with astounding results in this heretofore comparatively untilled field of interrogative scrutiny. That the crude drugs and standard preparations approved by the United States Pharmacopeia and prepared and exploited by reputable pharmacists should, in all instances, be found trustworthy admits of no denial.

It appears, however, from the reports of the Board of Health of New York City, on the analytic findings incident to the examination of crude drugs, tinctures, fluid extracts, etc., as compared with corresponding standards adopted in the United States Pharmacopeia, that reputable pharmacists have, because of commercial indifference, or studied intention, not infrequently contributed to therapeutic misfortune through the quality and strength of their drugs. I will call your attention to only a few illustrations which are an emphatic earnest of the need of general scrutiny of the pharmaceutical part of our therapeutic armamentarium.

It is a matter of general knowledge that aconite is a drug of potent nature and in comparatively common use. Of this drug five of the thirteen samples analyzed were of the tincture and fluid extract of the root. Of the three specimens of the tincture one had 9 per cent. more, and of the remaining two 6 and 20 per cent., respectively, less of aconitin in than the standard requires. The two samples of extract of the root had 13½ and 25½, respectively, more aconitin in than is required. The remaining six samples were of the powdered root which in no instance was sufficiently abnormal to call for admonition. The samples of belladonna showed, respectively, from 35 to 45 per cent. less of mydriatic alkaloids in the powdered extract of the leaves, 11½ per cent. less in the fluid extract of the root, 17 per cent. more in the tincture of the leaves and 47½ per cent. in the fluid extract of the leaves than is required by the United States Pharmacopeia. Powdered nux vomica was found to be comparatively worthless, but in the tincture and fluid extract was revealed an excess of strychnin above the required standard of 19 and 17 per cent., respectively. In the tincture of opium was found, of morphin 7 to 13 per cent. more than the accepted standard of composition.

In 1/100 grain tablet triturate of nitroglycerin was discovered only 1/1,600 of a grain of the drug. It is said that this preparation of nitroglycerin was known by the manufacturers to be unreliable and, therefore, should not have been exploited at all or in a guarded manner. It is not difficult to foresee how the failing to secure proper response from the use of these or other tablets of uncertain strength that the substitution therefor of a fresh solution of the drug might result unfortunately, especially if the dose of the fresh preparation were of the same amount as was that of the tablet last given. I have in mind an instance of this kind in which the use of a fresh solution of strychnin caused a fatal result.

It further appears that of the first sixty-one samples of drugs examined by the health department, all of which "articles are of exceptional importance, most of them potent poisons, and all are represented by definite

chemical standards in the Pharmacopeia," only about 28 per cent. of the whole number was considered good and 16 per cent. were so bad as to justify legal action. It is proper to say that the majority of the manufacturers recognizing the awkward position in which they were placed, with a spirit of yielding opposition complied with the reformatory demands of the health department. This list of producers is small in numbers compared with those who are engaged in similar business in the United States, and, no doubt, present as favorable picture of this class of the drug evil as can be drawn.

Nor is the aforegoing distress the only torment in pharmacy with which the medical profession has to contend. The idealized, savory products of pharmacy with which the market is cloyed are often quite as fickle in their nature and virtues as was a certain ancient queen of the Nile. Discreditable business thrift supplemented by cooperative professional contentment and convenient indifference, patronized by confiding and credulous people, yields princely returns for the diminutive cash and equivocal integrity invested in it.

Not all of those, however, engaged in the pharmacal trade are unworthy of the trust and confidence given to men in other avenues of business. Very many, indeed, thus engaged are as sincere and trustworthy in their business affairs as are the best of those in other undertakings. Therefore, the old and revered principle of common justice, while emphasizing the fact that every person should be regarded as being honest until the contrary is proven, should be kept in mind and action. Consequently, in our conduct of matters imbued with professional or business virtues, the resolution should be to estimate uprightness of character by the tenets of common justice, and not by preconceived notions hostile to the principles of established equity. Purposes thus graciously fortified command respect, and gain in strength because of opposition. The reverse, however, will beget distrustful thought and may finally cause defeat. In this recital I can not overcome the belief that we ourselves contribute a major share to the inception and success of many medicinal ventures by our indifference or ignorance relating to savory prescribing and also by our thoughtless employment of proprietary medicines. Here, too, is a chance for medical teachers to instill proper notions regarding consistent ethical and therapeutic refinements.

When John Dryden wrote, "virtue is her own reward," he expressed a sentiment in keeping with the self-sacrificing spirit characteristic of the members of the Council on Pharmacy and Chemistry of the American Medical Association. I am creditably informed that these gentlemen are serving the profession and the people in this labor without the expectation of vulgar reward or the anticipation of special favor. I desire to commend their motives, approve of their work, and bespeak on the part of the profession an earnest support of all wise conclusions. Those who labor in a just cause without stipend are deserving of great praise; those, however, who serve for pay can only expect approbation.

But little less important than the preceding, in some respects, would be the careful scientific consideration of the therapeutic value of the abundant springs of our country. There is much, indeed, of special significance regarding their popular use which might well be garnered and put on a sound basis. A scientific cooperation with those who are in charge of certain baths possessed of traditional specific value might readily guide to improved conditions of significant importance to all those who seek relief. A country as rich as ours in these spontaneous endowments can well afford, in proper ways, to court the attention and support of the afflicted and to the decided advantages of all concerned.

THE MEDICAL PROFESSION IN CIVIC LIFE.

The sincere belief, on my part, that the outcome of professional governing policies of common interest in our affairs are practically alike in county or state prompted me in a recent parting address to the united medical profession of the State of New York to say: "The organization of the medical profession here and everywhere throughout the country contemplates the realization of more than the scientific advantages arising from personal contact and local cooperative thought. It should be regarded as an earnest that the medical profession intends to take an active and controlling part, if possible, in those affairs of civic life which relate to the well-being of the body politic. There should be no question regarding the status of the medical profession in all matters relating to the securing of pure food, pure drugs and wise public sanitation." Also it was said: "It would be sadly amiss, indeed, were I not to admonish you at this time, the opening of a united career, of the grave perils begotten by a spirit of paternalism which not infrequently is a pernicious by-product of organized power. The seductive and aggressive influence of this spirit often usurps and may inhibit that nobler, more enduring and beneficent spirit characteristic of common manhood and professional brotherhood. And it should not be forgotten that the greater and more extended is the membership of a fraternal body the greater and more extended are self-seeking desires apt to be. Consequently the longer the chain of affiliation is the weaker it may become, for, as you already understand, "no chain is stronger than its weakest link." I pause to inquire is there any good reason to doubt that the medical organization of the nation might not respond to similar influences? Let us, however, cherish the belief that wise discretion fittingly stimulated by just conceptions of fraternal spirit will guide us securely along the pathway of increasing professional attainment and good fellowship to the end of useful life.

And, finally, when by the aid of Divine Providence, the medical profession of the United States shall have been made into "one compact organization" and impelled in dutiful desires only by the highest motives of professional purpose and of public welfare, no enlightened opposition will oppose its desires, nor will irrational outcry, nor vagrant motives, find patient listeners or available foothold in the councils of the organization or in those concerned in the requirements begetting of public confidence and respect.

The Campaign Against Mosquitoes and Flies as Carriers of Infection.—Santori appeals to physicians throughout Italy to take the lead in educating the public in regard to the dangers from flies as well as from mosquitoes, and to lead also in enforcing practical measures against them. Some of the French watering places have decreed and carried out the destruction of mosquitoes as a purely business measure, to relieve the visitors of the former plagues of mosquitoes. At Bourbonne the pools of stagnant water were covered with a mixture of one-third rapeseed or colza oil to two-thirds petroleum. This was repeated every six days, using about 35 ounces of the mixture to 100 square yards. The benefit was not fully realized until three or four weeks after the first experiments, when the town was astonished to find that it had been absolutely delivered from the perennial plague.

THE RELATION OF THE CLINICAL LABORATORY TO THE PRACTITIONER OF MEDICINE.

ORATION ON MEDICINE AT THE FIFTY-EIGHTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 4-7, 1907.

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The change that has been brought about in our conception of disease and in the manner of its detection through the discovery and invention of instruments and methods of precision and the application of improved laboratory technic is one of the most striking characteristics of the marvelous advance in medicine of the last half century. To realize what this means, think for a moment how comparatively helpless we should be were we suddenly deprived of bacteriologic aid in diagnosis with its attendant specific serum reactions; of the improvements in technic of the last fifty years in the way of microscopy, stains, section-cutting, etc.; of the study of the corpuscles of the blood and the estimation of its hemoglobin; of our knowledge of the chemistry of the stomach; of the cytologic, bacteriologic, chemical and physical facts concerning normal and pathologic fluids of the body; of the means of measuring blood pressure; of the numerous electric light appliances that enable us to explore nearly all the orifices and cavities of the body; of the Roentgen ray; of the improved qualitative and quantitative chemistry of the urine and feces; of aids from physical chemistry. Think of how poverty-stricken we should feel were these aids taken from us—and they are by no means all of this class that might be enumerated—and then, and then only, do we begin in faint measure to realize the enormous value of these additions to our knowledge that have been made in the last few decades and the almost revolutionary change they have wrought in the methods of diagnosis.

These instrumental and laboratory methods, depending as they do on applied physics, chemistry, anatomy and physiology, have to do with the more exact sciences. They are, therefore, commonly regarded as having in them something of mathematical exactness, something of the element of finality. A piece of tumor viewed under the microscope, a bacillus obtained from the blood, grown, studied and seen with the oil immersion lens, a chemical test of the urine with the substance in question not only proven to exist but actually recovered and weighed in the balance—what are these but accurate procedures whose results must be correct. The physician, not clearly understanding all the workings of the laboratory, and dazzled by the brilliancy of the splendid results that have come from it, stung by the taunt that his practice is but empiricism, and smarting because conscious that the taunt is justified, has hailed the laboratory as his deliverer from the thralls of empiricism, irrationalism and mere experience and has looked up to it as the embodiment of science, as a never-failing aid in solving the mysteries of disease. The laboratory method has, therefore, in the minds of many acquired a transcendent importance; anamnesis and physical examination seem old-fashioned and unreliable. The laboratory is viewed as a *sanctum sanctorum* pervaded by a purer light than the wards of the hospital: and the laboratory man as a superior being, the incarnation of all that is scientific in medicine and whose word can not be questioned. Dr. L. Emmet Holt[1] has recently put it in this way:

> The men of the laboratory to-day dominate medical thought. They form a sort of oligarchy, to whose decrees those who study medicine at the bedside only, must needs submit, often with a subconscious feeling of their own inferiority.

And he adds:

> I can not myself resist the opinion that the man of the microscope and the culture tube occupies just now a place of too great importance, at least in the minds of the medical student and the younger practitioner.

Now, nothing has given a greater uplift to medical thought and practice, and especially to diagnosis, than the laboratory. Its aid in indispensable. But it has its own proper place. The earlier tendency to overvalue its work and to undervalue that done at the bedside is having the natural result in a swing back of the pendulum, and we are now hearing voices on either side of the Atlantic cautioning against the undue magnification of the laboratory at the expense of other aids to diagnosis. In our own country several writers have recently referred to the subject, and within a few weeks a large body of select medical men—the Congress of American Physicians and Surgeons—has considered the subject in a symposium, "The Relative Value of Laboratory and Clinical Methods in Diagnosis."

I have thought the matter of sufficient importance to be made the subject of this address. And particularly because I feared the papers of the symposium just referred to might not reach the bulk and sinew of the profession, viz., the general practitioner, and because I felt that too much emphasis could not be laid on certain points, I shall, even at the risk of seeming to repeat much that has just been said by others, venture to speak on "The Relation of the Clinical Laboratory to the General Practitioner."

It should be understood at the outset that I am not referring to laboratories devoted exclusively to research, such as the Pasteur Institute, Koch's or Ehrlich's laboratories, the Lister Institute of Great Britain, the Rockefeller Institute or the Memorial Institute for Infectious Diseases. I refer particularly in this discussion to what is commonly called the clinical laboratory, the laboratory that is run as an utility, as an instrument of precision, if you please, in the armamentarium of the physician, the place to which he takes to examine himself or to have examined by others his specimens of blood, sputum, stomach contents, cultures from the throat, or fragment of tumor, hoping for aid in diagnosis and hints as to prognosis and therapy.

But let me add that unless such clinical laboratory, no matter how small it may be, has in it the essence of research its work becomes routine and non-progressive. It is the search for the new that activates. A slow but sure death overtakes the laboratory as it does the ward in which there is no spirit of investigation.

It seems to me that certain mistaken notions obtain regarding these laboratories, which lead at times to strained relations and misunderstandings between the practitioner and the laboratory expert. These are due to faults that lie partly in the laboratory worker, partly in the physician.

First as to faults of the laboratory. And I dismiss from this criticism laboratory work that is done by incompetent men, poorly trained or careless. That some of these men pretending to do scientific work are en-

1. Holt (L. Emmet): Medical Tendencies and Medical Ideals, THE JOURNAL A. M. A., March 9, 1907, p. 845.

tirely unfitted for it is, of course, true, but this is no just reflection on the laboratory method as such, any more than an incompetent practitioner of medicine should lead us to condemn the entire system of practice.

In the first place there is often a failure on the part of the laboratory to acknowledge frankly its inherent limitations. The truly great men in this line of work are ever the most conservative in the expression of opinion. There is too clearly present before their minds the possibility of error in technic, of false interpretation of that which is seen, of our poverty of knowledge concerning some of the even common laboratory reactions. These are the men who are always on the lookout for artefacts, who refuse to state positively, from microscopic examination alone, that a smear from the throat does or does not contain diphtheria bacilli, who hesitate to declare that a cellular form is the ameba coli, who may decline to pronounce whether a given section is from a sarcoma or an inflammatory swelling. These are the laboratory men who have the courage to say: "I don't know," or "It is impossible for any one to tell." Were there a franker willingness on the part of the laboratory expert to admit these limitations of knowledge, just as the clinician must at times acknowledge his inability to interpret physical signs, there would be in the end a distinct gain in confidence in the laboratory rather than a loss when the practitioner finds from subsequent history of the disease, as he sometimes does, that the opinion of the laboratory so positively expressed was wrong.

In the second place there is at times a failure on the part of the laboratory to realize the gravity of the duty imposed on it by the physician. The family doctor, with the medical or surgical consultant, may have exhausted their means of diagnosis. The laboratory expert is called on. On his findings depends, perhaps, the loss of the uterus in a young wife for supposed carcinoma, the sacrifice of a limb for what seems to be sarcoma but may be really gumma, the giving up of life's plans and hopes because of supposed tuberculosis of the lung or kidney, the diagnosis being based on some doubtful tubercle bacilli in the sputum or urine. The laboratory worker is often so remote from his patient that he fails to feel that personal responsibility of which the family physician is all too conscious, and so, scarcely realizing the importance which attaches to his decision, he may make it on insufficient grounds. Were he to feel the full import of this decision, in doubtful cases he might admit more frankly to himself and to the physician his inability to reach a positive conclusion. Repeated or later examinations could then be made, thus clearing up the diagnosis. Or, in the event that uncertainty still remains, the matter could be frankly discussed with the physician and the family and the best combined decision possible under the circumstances could then be honestly reached.

Third, there is a tendency for some laboratory workers to step beyond their province and make diagnoses that are unwarranted by the facts and perhaps unasked for and even to advance a prognosis and advice as to treatment. Strictly speaking, the laboratory's function stops when it announces its findings. The interpretation of the laboratory findings rests with the practitioner. I am aware that no sharp line can or should be drawn here, for, as I believe, these two men should work together and should both be practitioners, both be in close touch with the patient. But I criticise such things as this. I have seen, and more than once, reports from clinical laboratories reading somewhat as follows: "This urine is from a typical case of chronic interstitial nephritis" when forsooth it was not; it was from a typhoid drinking huge quantities of water passing urine of low specific gravity and of large amount, with a trace of albumin and an occasional cast. Often I have seen the positive diagnosis of pernicious or secondary anemia made from a blood smear alone, sent in to a laboratory. We know this is possible, but it is risky. And many times have I seen a report that said in substance, often in so many words on the basis of a Widal reaction: "This is (or is not) a case of typhoid fever." And when free hydrochloric acid has been found in the stomach contents the statement is returned: "This is not a case of carcinoma." Such reports, I need scarcely say, are wholly unwarrantable. They are as inexcusable as for the clinician to percuss the chest and listen with the stethoscope and declare positively that the case is or is not tuberculosis of the lung, without paying attention to the anamnesis or to the other physical findings, the sputum, etc. Nothing has done more to bring the laboratory into disrepute than this irrational, almost meddlesome, method of venturing a diagnosis on wholly insufficient grounds. It is hardly an excuse that the laboratory is often asked for a diagnosis by the physician who is unable to interpret the findings. The answer even then should be a guarded one and one liable to revision in the light of clinical findings. The laboratory man should stand, if you please, in the nature of a consultant, the opinion in the case, while influenced, of course, largely by the laboratory findings, should always be the combined opinion of the practitioner and his colleague, the laboratory man.

On the part of the practitioner there is often a failure to recognize the limitations of the laboratory. As I have said, the physician too often has the notion that the laboratory method is supreme and that it renders unnecessary and obsolete the old-time careful bedside observation. The possibility of error on the part of the patient or of the physician who provides the specimen for examination, particularly a specimen for bacteriologic examination, the personal element of carelessness, haste, hurried conclusions in the laboratory operator, faulty or balky instruments or reagents, the entrusting of important details to immature assistants, these are some of the ways in which error may creep in and ways concerning which the practitioner untrained in the laboratory is ignorant.

But while this kind of limitation of the power of the laboratory has to be reckoned with, it is after all not so much a fault of the laboratory itself as of the individual worker. But misinterpretation of laboratory findings by the practitioner is common and is grave. And this is due to no fault on the part of the laboratory, but rather to the shortcomings of the methods themselves and the failure on the part of the practitioner to take cognizance of this fact. Many of the aids to diagnosis are regarded as more far-reaching and comprehensive than is the reality; they are looked on as pathognomonic and as without exception infallible. This comes about because often earlier reports as to the value of these tests are rosy-hued and conclusions are sweepingly and definitely stated. The later observations throwing doubt on the method are slower to get into print and are less likely to attract the attention of the busy practitioner than is the heavy headlined favorable report. Frequently, too, he trusts for his information to a brief conversation with a friend, to an in-

complete abstract in a corner of a medical journal, or to a half-understood discussion in a medical society; and he grasps at this new, supposedly infallible method as he may grasp at the "patent medicine" or the newly-advertised drug that promises to cure so much. How many physicians to-day are treating cases for something else than typhoid because a single serum test, made perhaps early in the disease, has failed to show the specific reaction, overlooking the fact that this reaction is very capricious as to the time of making its appearance, and overlooking, what a few years ago would have enabled them to make a diagnosis, the course of pulse and temperature, the spleen, rose spots, tympany, facies, etc.? Or how many times has the failure to find free hydrochloric acid been regarded as conclusive evidence of carcinoma of the stomach? And who among us has not had his hard fall from placing too great reliance on the presence or absence of leucocytosis? We should remember that many of the tests are not yet clearly understood, that in a sense they are still on probation and still to be regarded as only approximately correct. It is a good thing to have appear occasionally such papers as those of Richard Cabot[2] on the "Limitation of the Urinary Diagnosis," and of Emerson[3] on the "Accuracy of Certain Clinical Methods," the one showing how the interpretation commonly put on certain laboratory findings is not always in accord with the facts as shown by the examination of the patient *intra vitam* or postmortem, and the other how some of our methods, by many regarded as quantitatively accurate, are in reality subject to a rather wide margin of error.

Unfortunately, some of our laboratory work is still more or less empirical. What Bismarck said about politics—"*Die Politik kann nicht im Laboratorium gemacht werden denn sie hat überall mit dem Menschen zu thun*"—might be applied, as it has been,[4] to medicine. Medicine can not be made in the laboratory alone, for it has to do with living man. Numerous observations may show that there is some general law that lies back of a certain laboratory reaction, but exceptions here and there to the law as tentatively enunciated make the wiser man realize that in dealing with the complex living body the conditions are different from those found in the test tube or the incubator, that his law may after all not be so general and broad as he had supposed, and that great judgment and in a measure an empirical judgment must be exercised in interpreting the findings. As Dr. Barker[5] has well said, the science of medicine is only slowly reaching the stage of development when the formation of brief laws—so-called general laws—is possible. We are still largely busy establishing and collecting facts, comparing them and arranging them according to their mutual relations, and only occasionally cautiously venturing to hint at some general law.

Then again too often the difference between a positive and a negative finding is not clearly kept in mind. Because no plasmodia are found in the blood on a single, even though careful, search, malaria is not necessarily excluded, though the finding of even a few proves malaria.

This fault that I have just referred to is entirely on the part of the practitioner. The laboratory has reported exactly what it has found; the physician has misinterpreted the finding. Most diseases have yet to be recognized not by some one symptom or sign that is pathognomic, but by a complexus of symptoms and signs. Nearly all the laboratory findings should be viewed in the same light as important symptoms, greater or less weight being attached to them as we learn from experience or know from their inherent character that they approach the pathognomic. To illustrate: The finding of typhoid bacilli in the blood is of greater diagnostic value than the Widal test; the latter outweighs in importance the diazo reaction of Ehrlich, and this in turn is of more diagnostic value than the finding of a concentrated urine with perhaps a trace of albumin. The first test is conclusive of typhoid infection—at least according to present notions—and outweighs anamnesis and physical examination. The Widal reaction, either positive or negative, must be more carefully interpreted because not yet clearly understood, because possibly delayed in making its appearance or perhaps influenced by a typhoid long passed and possibly even due to microorganisms closely related to the typhoid bacillus; the history of the case and the physical findings must here be taken into account. The diazo reaction found in other conditions than typhoid is so far removed from the category of a specific reaction as to be viewed only as confirmatory and as outweighed by many other findings. A concentrated urine and a trace of albumin are so common in febrile conditions as to lose nearly all real diagnostic importance. The physician must have some reasonably clear conception of the relative importance of these and analogous procedures or his interpretation is liable to be faulty and misleading, even to the extent of grievous error. The laboratory finding must be fitted into the symptom-complex as a cardinal symptom perhaps, but must not be permitted to usurp the position of prime importance unless its inherent nature entitles it to such a position. The fact that its place of birth was the laboratory does not give it such rank that it may look down on the symptom or finding whose origin was the lowly ward bed.

And, lastly, while the laboratory expert shows at times a lack of appreciation of the responsibility he is assuming in expressing his opinion, the physician has no right to throw the entire responsibility of an important decision on the laboratory. The decision in a perplexing case should be a combined one, the men working as colleagues, and each man sharing in the responsibility, each entitled to his reasonable fee.

Now these faults that I have specified are remediable. The solution lies in two directions—first, in a better practical training of the undergraduate in laboratory technic and methods so that he realizes the difficulties, limitations and possibilities of the laboratory; second, in the closer relation between the laboratory expert and the clinician and when possible their union in the one individual. The closer the laboratory and the patient the less the liability to error. The less the scattering of responsibility the surer is the responsibility to be met.

To these ends there should be: Laboratories in our medical colleges for the training of undergraduates, and these should be as closely connected with the wards of the hospital and the clinic as possible.

No modern hospital should be regarded as well equipped that does not make provision for a laboratory. The "show room" of the hospital should not be alone the marble-wainscoted, well-lighted operating room but as well the laboratory where material aid is obtained in tell-

2. Cabot (R. C.): THE JOURNAL A. M. A., March 18-25, 1905.
3. Emerson: Bull. Johns Hopkins Hosp., January, 1903, xiv, No. 142.
4. Hemmeter: Science in Medicine, THE JOURNAL A. M. A., Jan. 27, 1906, p. 244.
5. Barker, (Lewellys F.): Methods in Medicine, Boston, 1905.

ing the physician or the surgeon the nature of his patient's illness, or, perhaps after he has operated, telling the surgeon for what malady he operated.

Departmental laboratories are desirable and, on the same principle of keeping the laboratory and the attending staff in close touch and removing the dangers coming from divided responsibility, there should be, when possible, ward laboratories, or laboratories for the individual attending man. And the time will soon come, if it be not already here, when the laboratory of the clinic or the ward must have its subdivisions into chemical, bacteriologic, anatomic, etc.

And in private practice how is it? Ideally each practitioner should have his private laboratory. He attempts it now, thus admitting the truth of the statement, with his few begrimed test-tubes, his bottle of nitric acid and his Fehling's solution and the binocular microscope under that large glass globe on the marble-topped table in front of the window in the parlor. But there are many men, and their number is rapidly increasing, who have a microscope that they use, who are equipped to do in their own offices good work in the examination of urine, blood, sputum, feces, stomach contents, pieces of pathologic tissue, etc. And as they grow too busy to do these things themselves they employ the young man fresh from the college laboratory, and, guiding and directing him, instructing him in the practice of medicine, instructed by him in the later improved methods just taught him in college, they work together, mutually benefiting, keeping up with the times, and exemplifying the union of the laboratory and the clinical side of medicine. But not every man is able to do this or feels that he can afford it. Can not groups of men combine to employ some young man to do much of this laboratory work? These group laboratories, or what amounted to such, I have seen in small towns where a recent graduate, perhaps not on any salary, was yet the man to whom the other physicians by common consent submitted their specimens for laboratory examination, and because all did it there was no feeling of lowered dignity or of acknowledged inferiority, but perfect harmony, good feeling and mutual profit.[6]

And similarly the county medical society might have its clinical laboratory under the charge of some young man paid a salary, or fees for separate examinations who conducts a laboratory to which any member might feel free to go for the help that for various reasons he can not get in his own office. Laboratories for counties have already been established and, if not too much entangled in politics, ought to be successful, especially in the way of guarding the health of the community and in aiding in the diagnosis of charity cases.[7] In the same way municipal laboratories have become a recognized feature of the modern city, though the carelessness of the political appointee or his incompetence, with that lack of feeling of personal responsibility that comes from the remoteness of the physician and the patient, detract oftentimes from their value. Commercial clinical laboratories in our large cities are of great service and have a legitimate place, their value depending on the personnel of their staff and on how far they permit the commercial side to overshadow the scientific.

What I would contend for, therefore, is not less laboratory work but more, more for the undergraduate and more for the practitioner. So well trained should our graduates be that certain laboratory procedures of established value should be no more the exclusive property of a select few—the laboratory men—than is the clinical thermometer, the stethoscope or the obstetrical forceps; all should understand and be able to practice them. And I would plead for the closer relation between the laboratory and the patient. Clinical means bedside. Let us have the microscope, the test-tube, the culture medium, the *x*-ray at the bedside, making a real clinical laboratory. And not only should there be a training of the physician in laboratory technic, but a training of the laboratory worker in observation of disease. The more familiar he is with illness the better does he understand the import of his decision, the more acutely does he feel the responsibility resting on him and the more helpful does he become as the co-worker of the practitioner. In exceptional cases exceptional laboratory knowledge or skill may be necessary and can be obtained of some one who has made a special study of some particular branch of pathology, bacteriology, physiology, chemistry, etc., in just the same way that the practitioner in exceptional cases calls for the help of the expert oculist, neurologist, laryngologist or other specialist. Because he asks the opinion of the ophthalmologist on the appearance of a retina is no reason why he should not himself have a practical working knowledge of the use of the ophthalmoscope or why he should not have the final decision as to the nature of the patient's ailment—using the findings of the oculist as one of the cardinal symptoms and the opinion of the oculist as that of a consultant but not necessarily the final arbiter of the case.

And I can not let this occasion pass without urging that we have a care lest we underestimate the value of close observation of the patient himself. Much of this is still empirical, at least in its results, i. e., its interpretation. But the stored-up and collated observations of keen-eyed and keen-brained students of disease, from the time of Hippocrates down to the present, are not to be lightly thrown aside. The laboratory must not be permitted to drive out the arts of auscultation and percussion. Because bacteriology, the microscope and the *x*-ray often enable us to make an early diagnosis we should not rely on these agencies to the exclusion of the older methods. Rather should we be led to greater care in examination because of the possibility of earlier recognition of disease and more accurate interpretation of slight deviations from the normal, for the laboratory has sharpened our insight into the meaning of signs and symptoms otherwise obscure. To repeat what I have several times said, it is only by the correlation of the results of the examination by all methods that the conclusion is reached as to the nature of an illness.

I might quote from various writers who have recently deplored the tendency to overestimate the importance of laboratory methods at the expense of bedside observation and who urge the more close union of the two methods. Let me cite just two: Von Noorden,[8] well known for his laboratory research, in his inaugural address on assuming the Vienna chair left vacant by the death of Nothnagel, while speaking of the enormous advances made in the way of chemical, microscopic, bacteriologic and electric diagnosis, deplored the fact that auscultation and percussion were treated in a step-motherly fashion and that students were graduated who were only superficially

6. Cowan (J. R.): Value of Laboratory Methods to the Country Practitioner, Boston Med. and Surg. Jour., March 8, 1906.

7. Wesbrook: The Public Health Laboratory, American Medicine, March 3, 1906.

8. Von Noorden: Antrittsvorlesung, Deut. med. Wochschr., 1906, xxxii, No. 32, p. 1750.

trained in these methods of physical examination, the very foundation stones of practical medicine.

Strümpell,[9] emphasizing the importance of the Röntgen ray, of bacteriology and of a study of function in diagnosis, warns against permitting the old reliable methods of physical diagnosis to be relegated to the background.

The fine art of observation of the older physician, the painstaking attention to the minutest changes, the careful consideration of all anamnestic statements of the patients—all this may seem oftentimes trifling and unnecessary to the modern physician. But he is very much in error.

And again:

Therefore, I think that while employing all the newer methods of examination we should not allow to fall into disuse the art of pure clinical observation, the instrument of the practitioner whose place can be taken by nothing else.

A caution along another line ought also to be given. The use of instruments of precision and of laboratory methods in diagnosis has tended, at least in some quarters, toward a slighting of the study of pathologic anatomy. Changes in the size, shape, consistency and other physical properties of organs with resulting alteration in function, have been, and of necessity must be, the basis for many of our diagnoses. No bacteriologic or blood findings can detract from the detection and identification by physical examination of a large spleen, though the interpretation of such enlargement may be impossible without the study of the blood. There should be as careful comparison of clinical findings with those of the autopsy as in the days of Skoda and Rokitansky.[10] And encouragement should be given any method of diagnosis that tends to emphasize a study of function as altered by disease. Pathologic physiology, I believe, will play a far more important rôle in the diagnosis of the future than at present.

And then, in conclusion, we should not look on the laboratory as a short cut to a diagnosis. Sometimes it is, but often its workings are slow and cumbersome, and because of their complexity the results are not easily expressed in practical, every-day usable terms, and are, therefore, inconclusive or confusing. In other words, the laboratory diagnosis is not yet one of machine-like accuracy; it is no nickel-in-the-slot affair, if you will pardon the homely comparison. The time has not yet come, let us hope it never will, when a diagnosis can be made without the exercise of brain power. We do not wish our professional work to be degraded by being "dementalized," to use Weir Mitchell's[11] expression. Anamnesis, physical and laboratory findings are to be studied and compared and a result reached that not only gives a name to the disease but gives us a conception of the disease as it exists in the particular individual, with all that such a comprehensive diagnosis implies in the way of prognosis and hints as to therapy.

9. Strümpell: Eröffnungsrede zum xxiii Kongress für innere Medicin in München. Deutsch. med. Wochschr., 1906, xxxxii, No. 18, p. 726.

10. Concerning the value of the study of pathologic anatomy two European clinicians of prominence, men well versed in the theoretical and practical side of laboratory work, speak as follows: Romberg (Erfahrung und Wissenschaft in der inneren Medicine in Therapie der Gegenwart, 1905) says: "For the internist, pathologic anatomy is even to-day indispensable. . . . A thorough study of pathologic anatomy is the best school for the diagnostician." Neusser (Ueber Diagnostik und Therapie in der Inneren Medicin, Vienna, 1893), speaks of pathologic anatomy as even to-day the "mistress of our diagnostic art," and says a little later concerning the value of a control of our clinical work by autopsy: "Even yet the dead speak a language and this language brings to the intelligent physician at the bedside of his patient calm satisfaction and lends him strength and accuracy."

11. Mitchell (S. Weir): The Early History of Instrumental Precision in Medicine, New Haven, 1892.

ACUTE SUPPURATIVE PERITONITIS (LOCAL, SPREADING, DIFFUSE AND GENERAL)

ORATION ON SURGERY AT THE FIFTY-EIGHTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE 4-7, 1907.

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In thanking you for my election at the last annual meeting of the American Medical Association to deliver the Oration on Surgery on this occasion, I beg to express my high appreciation of the great honor conferred; for it is truly an honor to represent, in this capacity, the largest and most representative national medical association of any age or of any country. I feel the honor more keenly because I am but the humble follower of many of America's most distinguished surgeons.

In selecting the subject of my address I am mindful of the fact that the essential questions involved in the study of the etiology, pathology, diagnosis and treatment of acute suppurative peritonitis are of equal interest to the internist and the surgeon. The greatest success of surgery in saving life in these cases depends on early surgical diagnosis and timely operation, before pathologic conditions develop that may so impair the vital resistance of the body tissues as to cause death of the patient with or without surgical intervention; and as these patients usually first consult the internist, early operation is impossible unless the surgeon is promptly associated in consultation.

We will better understand the causation, pathology and treatment of acute suppurative peritonitis if we study the results of experimental research on the biologic processes of digestion, nutrition and bacterial growth, and the hygiene of the tissues in resisting bacterial pathogenesis.

As digestion must prepare the food-stuffs for absorption into the body fluids, to be utilized by the constituent cells of the body and appropriated into living tissues, a study of its processes, mechanical, physico-chemical and chemico-physiologic, is necessary in medicinal and surgical therapeutics in diseases of the gastrointestinal tract, of the gall bladder, bile ducts, pancreas and appendix, and in local and diffuse acute peritoneal infections, caused by pathogenic bacteria in the contents of these structures. Time will not permit me to discuss this subject, but I must call attention to the fact that a knowledge of the results of the experimental research in the physiology and mechanics of digestion by Pawlow, Starling, Howell and Cannon, of bacterio-biology by Metchnikoff, Welch and Hektoen, and of the bacterio-biology of the gastrointestinal tract by Metchnikoff, Herter and Cushing, of the anatomy of the peritoneum and its absorptive powers by Muscatello and Huntington, of the lymphatics by Cuneo, Delamere and Poirier and many other earnest experimental research students in these related fields of science, is of the greatest practical value in the treatment of the diseases of the organs and structures of the abdominal cavity.

In intrauterine life and at birth there are no bacteria in the gastrointestinal tract, and none are found in the stools until the ingested food containing bacteria passes from the bowel. The bacterial flora then increase in number, and finally any bacteria in the food-stuffs used may be found in the alimentary canal, but the only constant normal inhabitant, as now demonstrated from infancy to old age, is some type of the colon bacillus which seems to find its optimum conditions for growth in the intestine. It may be finally determined, however,

that other bacteria are normal inhabitants of the intestine, if not during both childhood and old age, at certain periods of life. The *Bacillus lactis aerogenes*, closely related to the *Bacillus coli*, is a normal inhabitant of the intestine during childhood, and these two germs, independently or jointly, may be conducive to health by aiding digestion, antagonizing intestinal putrefaction, and inhibiting the growth of other intestinal bacteria with positive pathogenic powers. In splitting carbohydrates they generate acids which limit intestinal putrefaction by the proteolytic bacteria, and may prevent pathologic processes which would otherwise develop in the existing alkaline fermentation.

In the small intestine, under normal conditions, only those bacteria capable of fermenting carbohydrates show any distinct activity, the bacterial putrefaction of proteids being limited or absent, so long as the products of proteid digestion are quickly absorbed. But in the large intestine bacterial putrefaction of the unabsorbed proteids is normal and continuous. While the secretions of the small intestine are always alkaline, the fermentation of carbohydrates generates organic acids which inhibit the action of proteid bacteria, and while this acidity may show no reaction to the stronger indicators, with phenolphthalein it may give an acid reaction. It may be that the rapid absorption of digested proteids in the small intestine is a factor, as well as an unfavorable reaction, in preventing proteid putrefaction. The presence in the colon of bacteria of the bacillus coli type may protect the organism against injury by hindering putrefaction of the undigested proteids.

While it has been demonstrated that guinea-pigs put immediately after birth in a sterile atmosphere and fed on sterile food lived and increased in weight, and when killed after eight days had no bacteria in the intestine, and that animals in the Arctic regions have practically no bacteria in the intestines, the conclusion is still irresistible that in man the great number and variety of bacterial flora in some way aid the intestinal ferments in completing normal digestion. In further evidence of this fact we have found no gastrointestinal enzyme capable of acting on cellulose, an important constituent of vegetable foods, which may be hydrolyzed by bacteria and rendered useful in nutrition. The claim that cells in vegetable foods contain an enzyme capable of splitting cellulose molecules has not been satisfactorily demonstrated.

So long as there is perfect digestion, absorption and assimilation, the great number and variety of bacteria living on the carbohydrates and proteids may be both harmless and conducive to health, but when some pathologic condition in the gastrointestinal tract disturbs the circulation, digestion and nutrition, they may quickly become mildly or virulently pathogenic and invasive.

Bacteria taken into the stomach with the food in normal digestion neither aid nor retard the action of the gastric ferments on the carbohydrates or proteids, because their growth is inhibited, and they may be destroyed by the acid secretion of the stomach. The inhibiting and destructive action of this acid secretion on bacterial growth is shown by the fact that the chyme when it enters the duodenum is usually sterile, and, in fact, the contents of the entire duodenum are practically so, the bacterial growth beginning near the duodenojejunal junction, the bacteria then increasing in number and becoming more pathogenic until the ileocecal junction is reached. This maximum number and virulence of bacteria at this part of the intestinal tract, and the abundance of lymphoid tissue in the appendix, with the liberal distribution of lymphatics in the appendix and cecum passing in their ascent over the ileocecal junction into the mesentery may account for the frequency and virulence of appendiceal infection, which is a more frequent cause of acute suppurative peritonitis than all other pathologic conditions.

With the exception of bacteria that aid digestion by splitting the molecules of the proteids that have not been absorbed in the small intestine and bacteria of the colon bacillus type, there are comparatively few pathogenic bacteria in the colon, and these usually have a minimum infectivity.

The sterilizing power of the stomach on food containing bacteria is only effective when the food is retained long enough to be acted on by the gastric ferments, but with liquid ingesta, such as milk, which usually passes immediately through the pylorus, the contents of the duodenum will contain practically all the bacteria of the ingested food.

The acid stomach secretion during normal gastric digestion, and after the food has all passed into the duodenum, by its inhibiting and destructive bacterial action, will sterilize the stomach, so that after from eight to twelve hours no bacteria can be found in its cavity.

Experimental investigation has also shown that any part of the intestine will finally become amicrobic when it has emptied itself of its contents; hence we may utilize these facts in some of our intraperitoneal operations and sterilize the stomach and some part of the upper intestine by giving the patient no food by the stomach for several days before he is operated on; or, when the patient's condition will not admit of this, give sterile liquid food, and have him cleanse his mouth frequently with some efficient antiseptic liquid for a few days.

These facts also tell us that the infectivity and virulence of bacterial invasion of the peritoneum is measured by the relative number and pathogenic powers of the bacteria that enter the peritoneum from the different parts of the gastrointestinal tract, the virulence being greatest when the infection occurs from the lower part of the ileum with the maximum intensity at the ileocecal and appendicular region. In perforative duodenal ulcer the leakage into the peritoneal cavity is often free of pathogenic bacteria and does not cause diffuse suppurative peritonitis, and when infective bacteria are present they are usually so mildly pathogenic that the resultant peritonitis remains local or spreads so slowly as to admit of successful surgical interference. Because of these facts and the relation of the duodenum to the liver, gall bladder, gastrohepatic omentum and suspensory ligament, not only is diffuse peritonitis often prevented, but the perforation is closed by peritoneal exudation and adhesion to adjacent structures. This would not be true, however, in imperfect gastric digestion with hypochlorhydria or impaired stomach drainage, for a feeble acid secretion would not inhibit bacterial growth in the ingested food, and when the food is retained too long in the stomach the putrefactive changes encourage bacterial growth; nor is it true in cases in which only liquid food containing pathogenic bacteria is taken, which carries the germs so quickly into the duodenum that no inhibiting effect can be exercised by the gastric secretions. Even in normal digestion and drainage the infectivity of the leakage would be increased when the duodenal perforation occurs with the stomach filled with undigested food.

The above applies in a modified form in pyloric per-

foration, because of the character of the contents in this part of the stomach, and also because of its relation to adjacent structures to which it may quickly form adhesions to close the perforation, or to localize the infection. This is not true, however, in ulcerative perforation of the cardiac end of the stomach, because the anatomic relations are so entirely different as to minimize the protecting influence of adhesions to adjacent structures in closing the gastric opening or in limiting the area of infection, and also because of the greater number and virulence of the bacteria in the leakage, for these perforations often occur with food in the stomach containing bacteria that acid secretion has not destroyed and the growth of which may have been but feebly inhibited. Clinical observation has shown this to be true, because of the fact that while only 10 per cent. of gastric ulcers are found in the cardiac part of the stomach, less than 50 per cent. of unprotected perforations are in the antrum.

In addition to the bacteria that ferment carbohydrates and cause putrefaction of the proteids, various pathogenic bacteria are constantly in the gastrointestinal tract, and, under favorable conditions, develop their highest degree of virulence and destructive effects, some being mildly and others virulently pathogenic, causing pathologic conditions characteristic of the particular germ. The germ may manifest its pathogenic powers in the intestinal mucosa membrane, may invade the intestinal walls and enter the circulation, causing septicemia, or pass directly through the intestinal walls, or indirectly through the blood currents to the peritoneum and cause acute peritonitis, local, spreading, diffuse or general. But we are especially interested in the pathogenic bacteria that are usually found in acute suppurative peritonitis, and which, with the exception of peritoneal septic infections from the uterus and its adnexa, nearly always pass to the peritoneum from the gastrointestinal tract or its appendices. Flexner has made a thorough study of peritonitis from this point of view. The bacteria that cause nearly all virulent acute peritoneal suppurative infections are the streptococcus, staphylococcus, colon bacillus and typhoid bacillus. While the colon bacillus is now the only recognized normal and constant inhabitant of the intestine, the streptococcus, staphylococcus and typhoid bacillus are present as the result of repeated introduction in the food; but the gas bacillus of Welch may occur as a normal inhabitant, and may be a factor in causing peritonitis.

The extent to which bacterial symbiosis or bacterial antibiosis increases the activity of bacterial growth and virulence, or inhibits bacterial growth and virulence in the gastrointestinal tract, or in the tissues or liquids of the body, has not been determined and may never be, for it is possible that the results of experimental cultural research *in vitro* may give an imperfect idea of what occurs *in vivo*. Nor has experimental research resulted in a consensus of opinion as to the invasive power of intestinal bacteria through an intact and normal epithelium. Herter claims that the normal epithelial cells of the intestine prevent the passage of bacteria into the body tissues, but Metchnikoff believes that during active normal digestion this is not true, and because of this belief it has been the practice in the Pasteur Institute never to take the serum from a horse until gastric and intestinal digestion is nearly completed and not until the phagocytes have destroyed the invading bacteria. He believes that bacteria increase in number in the intestine after the ingestion of food, probably to aid in some way digestion; and as the digested products are absorbed, some bacteria also enter the tissues and fluids of the body. Let this be as it may, it is probable that the intestinal epithelium is seldom in its entirety intact and normal, and it is often subjected to bacterial vaccination by hard, sharp, undigested substances, or by intestinal parasites. The constant presence of a layer of mucous on the walls of the gastrointestinal tract may not only prevent self-digestion of the tissues, but may also offer a mechanical protection to the epithelium against bacterial contact and invasion.

Metchnikoff, in examinations of appendices removed by operation, has found the oxyuris imbedded in the mucous membrane surrounded by an inflammatory zone, and has found similar traumatisms by other parasites here, as well as in other parts of the intestine, and it is well known that the ascaris sometimes penetrates the intestinal wall and enters the peritoneal cavity. I have had such cases.

However, bacteria that under favorable cultural conditions may become virulently pathogenic and invasive, may remain continuously in the intestine and cause no trouble, probably because of the inhibiting power of the non-pathogenic bacteria and the acid in the intestinal secretions generated in the fermentation of the carbohydrates. These inhibiting energies, aided by the more rapid movement of the liquid contents of the jejunum and upper ileum, may account for the relatively few bacteria in this part of the intestine, for the growth of most bacteria is impeded in a liquid kept in active motion. In the lower ileum the movement of the liquid contents is greatly impeded by the ileocecal contraction, which only admits the liquid into the cecum as it is needed for the completion of digestion and absorption in the ascending colon. Here again the liquid is retained by the contraction at the hepatic flexure and kept in nearly constant motion by an alternate reversal of peristalsis until nearly all the remaining nutriment and much of the liquid have been absorbed; when finally forced into the transverse colon most of the pathogenic bacteria have disappeared, and when the feces enter the rectum the bacterial flora are relatively few and the pathogenic bacteria may not be cultivable.

As acute suppurative peritonitis is often caused by the invasion of pathogenic bacteria from the organs contained in the pelvis, it is well to consider briefly the bacterio-biology of the vagina, uterus, Fallopian tubes and urinary bladder.

While in normal digestion and perfect health the gastrointestinal tract is always inhabited by an extensive bacterial flora, aërobic, anaërobic, non-pathogenic and pathogenic, we find no pathogenic bacteria inhabiting the upper part of the vagina, the cavity of the cervix or body of the uterus, or in the bladder when these organs and the kidneys are in a state of health, and pathogenic bacteria are only found in diseased conditions of these structures, having been introduced from without by infected media.

With an intact and normal epithelium of the urinary tract, bacterial growth is inhibited and the urine is free of bacteria and in no sense infective. But any part of the tract or the entire tract may become infected by the tubercle bacillus introduced through the kidneys, or by pyogenic germs of any degree of infectivity introduced through the urethra, and under such conditions acute suppurative peritonitis may result from perforation or rupture of the bladder.

Pathogenic bacteria may be abundant at the vulva

and in the lower part of the vagina, but they can not be cultivated from the secretions of the upper part of the vagina or in the neck or body of the uterus, the acid secretions of the lower half of the cervix and the vagina positively inhibiting bacterial growth. When cultures of pathogenic bacteria have been made from these secretions there had been a previous infection, or the bacteria were conveyed to the secretions from the vulva, because of the imperfect methods of the experimenters. The uterus and Fallopian tubes may be infected, however, by bacteria of all degrees of pyogenic and pathogenic virulence, resulting in mild or fatal forms of toxemia or septicemia or local and diffuse acute suppurative peritonitis.

Peritonitis from a gonococcal infection is never more than local, and when the gonococcus is found in diffuse peritonitis it is always associated with some more virulently pathogenic germ, the gonococcus having probably been the cause of the initial stage of the infection but being incapable of causing general peritonitis. Streptococcal infection is relatively more frequent and virulent in puerperal suppurative peritonitis than peritonitis caused by bacterial invasion from the gastrointestinal tract, and while some surgeons report a few successful results following laparotomy, Williams, in a broad experience, has had no patient recover, and, in fact, streptococcal peritonitis from a ruptured tube or pelvic abscess has nearly always caused death. In puerperal general peritonitis the streptococcus is probably the causative agent in about 40 per cent. of cases. The symptoms are usually very acute, culminating, with well-developed clinical and anatomic disturbances. While we may find in general puerperal peritonitis the streptococcus, the staphylococcus, the colon bacillus, the typhoid bacillus, the gas bacillus of Welch, the gonococcus and other bacteria, it is probable that in nearly all fatal cases the virulently infecting germs are the *Streptococcus pyogenes* and the *Staphylococcus pyogenes aureus,* the most actively virulent and invasive being the streptococcus.

But in peritonitis the same bacteria is not always equally pathogenic and invasive, and the resistance to bacterial growth and invasion may vary in different persons and in the same person under different physiologic conditions. The degree of virulence of any bacteria depends on its activity of growth, with a corresponding secretion and excretion of toxic substances which are diffused into the body tissues and are destructive to the vital functions on which life depends.

It is true that in all cases of suppurative peritonitis there is bacterial invasion, but it is not the bacteria that cause injury to the tissues or death of the patient, but the resultant chemical poisons of bacterial growth. Both the bacteria and the toxic products invade the body tissues through lymphatic or venous channels, but in all cases of peritonitis the endothelium is at least in places eroded.

The lymphatic capillaries are always closed and never have open communication with the serous membranes, blood vessels, intestinal epithelium or connective tissue, and the belief that there are permanent lymphatic channels of communication into the peritoneum of the diaphragm or any part of the peritoneum is based on erroneous data of observation.

Were it not for the antagonizing and destructive energies inherent in the fluids and tissues of the body against bacterial invasion and growth, life would not be possible; then let us consider the source of these energies, how they are manifested, and how best to preserve or to increase their efficiency in the treatment of acute peritonitis.

Volumes have been written and many conflicting theories offered to explain natural, acquired, active and passive immunity to the invasion of pathogenic microbes, but there is no consensus of opinion by the best authorities who have devoted their life work to experimental research in the laboratories of physiology, chemistry, bacteriology and pathology. In many things they all practically agree, but in other things they differ widely, and in some particulars their theories are contradictory. All was chaos until Metchnikoff discovered and demonstrated the resisting and destructive energies inherent in the leucocytes to bacteria, and if natural or acquired immunity is to aid in the prevention or cure of acute peritonitis, it must be by the acceptance and practical application of his theories. It may be necessary to sensitize the bacteria by some chemical product in the blood serum before they can be ingested and digested by the leucocytes, or before positive chemotaxis can be established, but this sensitizing or chemical product or products can not be formed in and by the blood serum *per se,* but must be derived from the active and vital cells of the body.

Experimental research may demonstrate finally that the extracellular chemical product of bacterial growth may sometimes be more protective than destructive in acute peritoneal infections by causing a positive chemotaxis, thus enabling the phagocytes to injest the bacteria before extensive invasion, and before bacteriolysis has liberated the intracellular toxic substances into the tissues of the body. It may also be true that a negative chemotaxis is not caused by an excess or an intensely poisonous product of extracellular bacterial growth, but because of an absence of the extracellular product. Phagocytosis would then be impossible, and bacterial invasion and growth would encounter but feeble resistance, and, finally, bacteriolysis would distribute a lethal dose of intracellular poisons into the vital tissues of the body. It is probable then that toxemia is caused by the bacterial endotoxic product.

Enzymes formed in the protoplasm of the leucocyte cause bacteriolysis of the ingested microbes and destroy their toxic products, and it is probable that the leucocytes excrete enzymes into the blood serum that sensitize the bacteria. If this be true, then anything that increases leucocytosis will correspondingly increase phagocytosis. With the exception of virulent bacterial invasion with a negative chemotaxis, all acute pyogenic or septic infections stimulate an increased leucocytosis and a more destructive phagocytosis. This being true, we should avail ourselves of any means that may give a better leucocytosis and avoid everything that may lower leucocytosis.

This may not harmonize with Wright's opsonic theory, which makes phagocytosis secondary to and dependent on some special chemical substance inherent in or introduced into the blood or other body liquids, but there is possibly no positive proof of the correctness of Wright's theory, and its general acceptance may depend on more successful results in experimental research *in vivo* as well as *in vitro.* But, granting all that Wright claims, the opsonic index can be of no positive value in the treatment of acute peritonitis, for a corresponding vaccine can not be cultivated in less than twenty-four hours, and the positive phase is usually twenty-four hours after vaccination—too late to be of

benefit—for within forty-eight hours after operation these patients will not need the vaccination, or a condition will have developed that will resist any treatment; and if vaccinated in a negative phase it may be positively harmful and cause death by lowering the opsonic index.

A stock sterilized bacterial emulsion is contraindicated in vaccine therapy in these cases, because we can never identify the infecting microbe until after operation, and we then often find a mixed infection.

It will thus be seen that in vaccine therapy by the opsonic index the bacterial emulsion will not be corresponding, unless the preparation be autogenetic, and this should be especially emphasized, even in the pure streptococcal infections, because of the variety of strains. The use of antistreptococcal serum in supposed streptococcal infections has resulted in no positive benefit, and but few surgeons or pathologists have confidence in its efficiency. This applies equally to the polyvalent antistreptococcal serum made from the streptococci of several strains, and in tests made by Hektoen and Ruediger in the Memorial Institute of Infectious Diseases it has been shown by experimental research that the antistreptococcal sera in general use possessed a lower opsonic index for the strains of streptococci than normal horse serum.

But it has been shown by experimental research on laboratory animals in the Pasteur Institute that the injection of horse serum strengthens the body's resistance to infective bacteria; and the same has been demonstrated in surgical operations by Petit and Fernet. That this influence was mainly phagocytic is proved by the fact that the serum was heated to not less than 56 C., which probably destroyed all its opsonins, but did not impair its action on leucocytes. Following the operation, there was an increased leucocytosis and a corresponding decrease in the number of microbes which were ingested and destroyed by the phagocytes. Petit also claims success in pelvic suppurative peritonitis, treated by pouring into the peritoneal cavity 30 grams of heated horse serum before closing the abdomen; and it is possible that practically the same result may follow pouring into the peritoneal cavity normal saline solution, or by the subcutaneous or intravenous use of horse serum, or normal saline solution.

Murphy has demonstrated that the colon will absorb a great quantity of saline solution introduced slowly, but the theory that the good results are from a reversal of the lymphatic current is probably not correct, for this is improbable in both lymphatic and venous absorption, because of the valvular protection against a return current. This, however, does not negative the value of Murphy's demonstration of the therapeutic aid of colonic absorption of saline solution following surgical treatment of acute suppurative peritonitis, and it is possible that results will justify its universal adoption. It fills the blood and lymph vessels, stimulates the circulation, improves nutrition, increases leucocytosis and results in a more destructive phagocytosis of the infecting microbes on the peritoneal surface and in the body tissues and may aid in destroying or eliminating the toxic products. Murphy does not offer any theory to explain the results of colonic saline absorption, but gives clinical reports only. While other means increase leucocytosis and phagocytosis, it is possible that the rapid and continuous stimulation of the blood and lymphatic currents by colonic absorption of saline solution in many cases may supersede all other methods, not only in acute peritonitis, but in all forms of bacteriemia and toxemia. It may also be well to use the saline solution or horse serum subcutaneously before an operation and to pour one or both into the peritoneal cavity before closing the abdomen. The lamented von Mikulicz, recognizing the efficiency of the phagocytes in antagonizing the invasion of pathogenic bacteria, caused an increase of leucocytes to 24,000 per one cubic millimeter by injecting subcutaneously neucleinic acid twelve hours before operation; and a similar increase in leucocytosis may result from the use of collargol and other means; but until experimental reasearch has convinced us otherwise we would better confine ourselves to the use of saline solution or the horse serum to cause increased phagocytosis and resistance to bacterial invasion and growth. Human serum immediately prepared from a normal individual and poured into the peritoneal cavity before closing the abdomen may cause a rapidly increased leucocytosis and a better phagocytosis, but experimental research must demonstrate the correctness of this suggestion.

In using means to increase leucocytosis and to develop a more efficient phagocytosis, we must not forget to avoid everything that will tend to lower the leucocytic count or to weaken phagocytic action. Opium, a remedy formerly much used and still used by many physicians and a few surgeons in the treatment of acute local, diffuse or general peritonitis, is positively harmful and is contraindicated before or after the operation. Experimental research has demonstrated that even in small doses it is harmful, because it quickly lowers the leucocytic count and weakens the phagocytic action against the invading microbes. While the immediate effect of alcoholic stimulation may temporarily increase phagocytosis, it is well known that persons who use it continuously or freely have a weakened resistance to many infectious diseases; therefore, if it has any place in the treatment of acute peritonitis, it should be used with much discretion. This conclusion is justified by a series of experiments by Déléarde, of the Pasteur Institute in Lille, and by Abbott and Laitinen.

Time will not permit me to enter further into the discussion of remedies that impair the power of phagocytes to ingest and destroy the invading bacteria; but I must insist on the avoidance of purgation; for anything that causes a flow of liquid into the intestine or increases peristalsis is positively injurious, because it weakens resistance to bacterial growth and encourages spreading of the peritonitis. The stomach may be emptied by lavage, and the colon by enemata, but the small intestine should not be disturbed, and if greatly distended by liquid and gas that will not pass into the large bowel it is better to empty it by enterotomy during the operation, for purgatives in such cases would increase the quantity of liquid and encourage intestinal paresis.

In the treatment of acute peritonitis, we may assume that pathogenic bacteria do not pass from the intestine through a normal intact epithelium, and that they do not pass into the peritoneal cavity through a normal intact endothelium. We may likewise assume that neither bacteria nor their toxic products pass from the peritoneal cavity into the body tissue through a normal intact endothelium. There are no peritoneal stomata, and the supposed openings are artefacts. The bacteria enter the peritoneal cavity through perforations or wounds from adjacent cavities, or through an endothelium after a pathologic condition has impaired or destroyed its nor-

mal resistance to microbic invasion; and the bacteria and their toxins pass from the peritoneal cavity into the body tissues through lymphatics or blood vessels, after injury or erosion of the endothelial cells. The intestinal lymphatics are superficial and deep—under the endothelium and above the epithelium—with intercommunications, but they never encroach on the endothelial or epithelial structures, or their derivatives. Muscatello has shown that, while the lymphatics underlie the entire peritoneal sac, the abundant supply is confined to the peritoneum covering the diaphragm, and that the flow of lymph is in this direction; hence, the relative rapidity of absorption in the apex of the upper abdominal cavity. The wisdom of this observation has been practically demonstrated in the successful results following peritoneal drainage in diffuse suppurative peritonitis, with the patient placed nearly in the sitting posture. If we are to get the best results in the treatment of these cases, it must be by the avoidance of everything that will encourage the absorption of toxic substances or the invasion of bacteria, and instead substitute the greatest possible resistance to such absorption or invasion. It will thus be seen that Clark did not correctly appreciate the hygiene of the tissues in resisting bacteriemia and toxemia when he treated acute peritoneal infections by placing the patient in a position to encourage diaphragmatic absorption. We must avoid peritoneal traumatism and remove intraperitoneal pressure in order to develop an effective phagocytosis of the bacteria and their toxic products on the surface or in the tissues of the peritoneum and encourage a peritoneal fibrinous exudate that may prevent microbic invasion or the absorption of the products of bacterial growth. It may be that in some cases of mixed infection, the *Staphylococcus albus,* which is mildly infective, may quickly cause a fibrinous protection, because of its more vigorous growth, before the more ineffective germ can become virulently pathogenic.

Our experience in the surgical treatment of pathologic conditions that cause acute peritonitis clearly indicates that we may usually prevent diffuse or general suppurative peritonitis by early surgical diagnosis and prompt removal of the foci of infection. If we operate under favorable environment for acute cholecystitis or appendicitis, before the infection has extended into the peritoneal cavity, the mortality will be practically *nil,* and we will not have 1 per cent. of diffuse, suppurative peritonitis; and these diseases may generally be diagnosed before gangrene or perforation, or bacteriemia and toxemia. If a differential diagnosis can not always be positively made between inflammation of these two structures, or any structure in the upper right quadrant of the abdomen, the symptoms will be sufficiently significant to justify an exploratory incision; and through the same incision the appendix, gall bladder, bile ducts, pancreas, duodenum and stomach may be exposed and successfully treated. In infections through the uterus or its adnexa, with the exception of virulent puerperal streptococcal infection, a diagnosis may be made before the peritonitis has extended beyond the pelvis, and the infected structures may be removed through a suprapubic incision. Diffuse suppurative peritonitis may often be prevented in unprotected gastric or duodenal perforation if operated on within a few hours, for the leakage into the peritoneal cavity is then usually sterile, or but mildly pathogenic, and if the perforation be successfully sutured these patients may recover without even local drainage.

Bearing on this point, I find the following in a recent letter from Moynihan:

"I do not consider the cases of perforating gastric ulcer or duodenal ulcer as cases of diffuse peritonitis. In the early cases I found an infection of the peritoneum, but in recent cases the cultures taken have usually been sterile."

In his early cases the operations were delayed, while in his recent cases they were timely. In the experience of Moynihan, gastric and duodenal perforations never come unannounced, but are preceded by significant symptoms for days, weeks or months. Under these conditions, in some cases may we not be justified in anticipating perforation by an exploratory incision and treat the conditions found as a preventive against perforation? But in any event we should be prepared to operate immediately after the perforation. Moynihan does not believe that drainage is necessary except in late cases, and then it should be through a suprapubic opening, with the patient in nearly the sitting posture. But in typhoid perforations, or perforations caused by projectiles, in the lower ileum, the leakage contains germs that are so quickly pathogenic as to cause peritonitis within a few hours. There are exceptions to this, however, in gunshot perforations on the battle-field, with modern rifles of small caliber, fired at long range, and with hard bullets that do not expand and pass through the intestine with an absence of explosive energy, leaving an opening so small as to minimize leakage. Experimental research has shown that when the intestine is wounded the afferent part is, for the time being, in a passive state, peristalsis having been inhibited. This removes pressure on the intestinal contents, lessens leakage, and admits of narrowing of the opening by muscular contraction, thus enabling closure of the wounds by plastic exudation. While this result is probably the exception, statistics show that in abdominal wounds on the battle-field, where the operation must necessarily be delayed and performed under bad environment, the mortality is increased by laparotomy and suturing wounds in the gastrointestinal tract. This does not apply to surgery in civil practice, where the patient can be operated on promptly and under favorable conditions. In these cases the perforations are usually inflicted at short range, with a large soft bullet, with a maximum of expansion and explosive energy, resulting in such extensive injury to the gastrointestinal tract as to cause death in nearly every case unless the visceral wounds be sutured within a few hours; and it may also be necessary to cleanse the peritoneal cavity of fecal matter and to use suprapubic drainage.

In gunshot wounds of the stomach, if both walls be perforated, it may be necessary to drain the small omental bursa through the gastrohepatic or gastrocolic omentum, or to establish posterior drainage. This is especially indicated in cases in which the projectile passes through a stomach filled with liquid, because the explosive energy imparted to the liquid medium mutilates the posterior wall and the tissues behind it, and if this traumatized area is not drained these patients will all die either of toxemia or sapremia, or of a mixed bacterial and sapremic infection.

Ochsner's belief that intestinal peristalsis is the most efficient means of distributing infection and causing diffuse peritonitis in cases of appendicitis is probably correct, and the treatment by which he causes

a relatively passive state of the intestine is also the best, and has done much good in delayed appendiceal cases when intelligently comprehended and practically followed; but unfortunately many physicians and surgeons have misinterpreted his meaning and have not been able to observe his methods, and as a result have caused more deaths by delaying operation than they have saved lives. Also, many physicians who know but little about Ochsner's treatment in localizing infection in appendicitis refer to him as a distinguished authority to justify them in advising against surgical treatment in all acute cases of appendicitis, and then continue to treat the cases by purgation and opium. But if Ochsner's treatment is not to be accepted in its entirety, let us indulge the hope that it may eventually, at least, convince the medical profession of the great evil of purgation in acute appendicitis and of the protection to our patients by gastric lavage and unloading the colon of fecal matter by rectal enemata until the appendix can be removed. Gastric lavage and an empty stomach may also relieve the intense pain in acute cholecystitis, and when an operation will not be permitted, or for any reason is delayed, may aid in preventing perforation of the gall bladder and diffuse peritonitis.

In a careful study of the statistics of all reported operations for diffuse or general peritonitis, the conclusion is incontrovertible that in many of these operations for gastrointestinal perforations performed early there was no peritonitis and often no pathogenic or but mildly pathogenic germs in the leakage. This is especially true in operations for perforations in the stomach, duodenum, jejunum, descending colon and rectum, and in leakage from bladder wounds. This does not, however, negative the fact that these patients should be operated on promptly, and the openings closed, for otherwise local and diffuse or general peritonitis will result and often cause the death of the patient, with or without surgical intervention. Therefore, if we wish to give our patients the best protection, we should operate as soon as a diagnosis is made, in every case of perforation into the peritoneal cavity, or intestinal obstruction from any cause, for but few of these patients will recover without an operation, and the dangers of an operation are multiplied in an increased ratio by delay. The mortality in delayed operations in typhoid perforations, and in perforations of the appendix, or of a pelvic abscess, of primary virulent streptococcal infection, will be practically 100 per cent. The lowest mortality in any series of typhoid perforations operated on promptly is not under 75 per cent., and nearly every case of puerperal peritonitis of streptococcal origin has resulted fatally under any treatment. Experimental research *in vitro* and *in vivo* in primary streptococcal diffuse suppurative peritonitis may finally show that all the strains are not equally virulent in this disease, but this may be of no practical value in the treatment. In many of the most virulently infective cases of streptococcal appendicitis, the peritonitis is localized by fibrinous exudations, but the germ is malignantly invasive and the toxic products lethal. Diffuse or general appendiceal peritonitis does not always indicate a virulent infection, for a germ of relatively mild pathogenic powers may cause a rapidly spreading peritonitis, because there are no fibrinous exudations and adhesions formed to isolate it. Such a case convinced me many years ago that all cases of general suppurative appendiceal peritonitis are not necessarily fatal. The patient was operated on seventy-two hours after the first symptom of appendicitis. His temperature was 104, his pulse 140, and his abdomen distended and muscles rigid. Pus was found in great quantity in the peritoneal cavity, from the diaphragm to the pelvis, and the peritoneum of the viscera and walls was inflamed and red, but there were no adhesions, and the peritoneum was moist and nowhere blistered or badly eroded. Irrigation was not used, but the wound was left open, and the cavity drained with a rubber tube and gauze. Twelve hours after operation the man's temperature and pulse were normal and his recovery was prompt and uninterrupted.

I have confined my remarks mainly to scientific principles as a basis for an intelligent understanding of the most essential things necessary in the prevention and treatment of acute, suppurative peritonitis, and have purposely avoided clinical reports of my cases; nor have I given the statistics of other surgeons to whom humanity owes a debt of gratitude, for these reports have been so accessible in recent medical literature that a repetition before this exceptional audience would be telling facts with which you are entirely familiar. However, I would suggest that future statistics of operations for acute, diffuse and general suppurative peritonitis, to be of the greatest value, must be based on more scientific principles and more accurate data of observation.

In conclusion, let me emphasize in a general way a few things, on the observance of which may mainly depend our future success in the operative treatment of all perforations into the peritoneal cavity; and in the prevention and treatment of local diffuse and general peritonitis from any cause.

1. Operate as soon as a surgical diagnosis is made and avoid purgation and opium before and after the operation. Give no food or liquid, and if there is no gastric perforation empty the stomach by lavage, and remove fecal matter from the colon by rectal enemata.

2. Operate rapidly and, if possible, treat the foci of infection by suturing gastrointestinal perforations, or bladder wounds, by cholecystectomy or cholecystostomy, by appendectomy, or the removal of the uterus or its adnexa, always remembering to avoid peritoneal traumatism so as to protect peritoneal resistance to bacterial invasion and toxemia.

3. Expose or handle the intestines as little as possible, and do not separate adhesions or irrigate or sponge the peritoneal cavity. Establish drainage from the bottom of the pelvis through a suprapubic incision, and, if indicated, also drain the site of infection, using a large split rubber tube with or without gauze, with the patient in nearly a sitting posture.

4. Pour into the peritoneal cavity, before closing the abdominal wound, hot horse serum or saline solution to stimulate leucocytosis, and when the patient is returned to bed use saline solution by rectum, after the fashion of Murphy, and, if necessary, use the horse serum or saline solution subcutaneously.

5. Enterotomy is never indicated, except in some delayed cases of intestinal obstruction or paresis, and it should then be performed quickly and with a minimum exposure of the intestine; enterostomy is contraindicated.

6. Physicians should be educated to impress on their patients the fact that acute diffuse and general peritonitis may usually be prevented by the early surgical treatment of gastric or duodenal ulcer, cholelithiasis and cholecystitis, appendicitis, tubal and ovarian infections,

and acute intestinal obstruction; also in many cases of gastric and duodenal perforations.

Finally, let me emphasize the fact that the treatment by purgation, opium and delay of the pathologic conditions that cause acute local, diffuse and general peritonitis, and bacteriemia and toxemia, has caused more deaths during the last ten years than have been sacrificed on the battle-fields of the world; and that in this progressive age of civilization he who obstructs the progress of science, medicine and surgery in the prevention and cure of disease and the prolongation of life, is committing an offense against the state, humanity, morals and religion for which the ethics of his environment may cause the people to hold him to a rigid accountability.

LAW, THE FOUNDATION OF STATE MEDICINE.

ORATION ON STATE MEDICINE, DELIVERED AT THE FIFTY-EIGHTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, ATLANTIC CITY, JUNE, 1907.

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Commissioner of Health of the Commonwealth of Pennsylvania.
President of the Academy of Natural Sciences of Philadelphia.
HARRISBURG, PA.

If I seek for a justification of your action in assigning to so humble an individual as myself the distinguished honor of delivering the oration on state medicine on the present occasion, I find it in the fact, perhaps known to many of you, that the state which I represent has recently placed on its statute book the most comprehensive and effective legislation for the protection of the public health ever enacted in any state in this country, and that, armed with these strong and well-conceived laws, we in Pennsylvania have been able to accomplish certain definite results which have attracted the attention of sanitarians in all parts of the United States.

The advances which have been made in Pennsylvania have undoubtedly had their counterpart all over the land, although not in so striking a degree. Everywhere the people, and therefore the legislatures, which are but the reflection of the people, are waking up to the vast importance of official sanitary work. The growth of the Section on Hygiene and Sanitary Science in this Association and in the corresponding association in Great Britain attests the strong hold which this subject is gaining on the members of our own profession.

But especially is this last fact to be observed in the increased importance given and space assigned to hygiene in the annual addresses of the presidents of this body. Time was when if matters of this nature were alluded to at all in those papers they were dismissed with a cursory allusion as of very inferior interest and importance, while now it is nothing unusual for the larger portion of the address to be given up to such themes. It is beginning to be seen that preventive medicine is of as serious import for the welfare of humanity as remedial medicine; and remedial medicine is finding her resources enlarged and her scope broadened by the addition to her armamentarium of biologic products, the first search for which was inspired by the desire to produce prophylactics against contagious diseases.

STATE MEDICINE THE ROOT OF HAPPINESS AND SUCCESS.

It is not too much to say that on state medicine depends the happiness of our people and the success of our nation. The varied industries on which we depend for our comforts, the wealth which enables us to enjoy them, and the arts of civilization which adorn and diversify our lives are but the fruitage of the tree whose root is health. The nation which is vigorous in its individual citizens will be strong as a whole. It was not so much the fire and sword of the Goth that devastated the fair fields of Italy and made proud Rome a heap of ruins as the physical degeneracy of a race enfeebled by luxury and the diseases which luxury entails, and ravaged by pestilence.

It is health that nerves the arm that wields the hammer and the sword, that gives keenness to the eye that sights the gun and that penetrates the mysteries of the microscope, that lends acuteness to the brain equally of the statesman, the inventor and the merchant. Without it the arm falls inert, the eye grows dim and the brain dull. Health is the great engine whose throbs, like those of the motor of the Jamestown Exposition, touched by electrical fire, send energy through all the great machinery of a peopled continent.

It is not enough that we should acquaint ourselves with the general principles of this great science of the health of a nation. We must become familiar with the minutest details of the methods by which those principles may be put into practical application.

No more striking object-lesson of this truth could have been given than the experience of two great nations in their conduct of recent wars: America, the boasted seat of applied science and center of illumination, possessing the full knowledge of the laws of hygiene, lost manyfold more of her brave troops on her own soil by preventable disease than by shot and shell at the seat of hostilities. Japan, just emerging, as we are accustomed to phrase it, from the sleep of ages and who had been sitting at the feet of other nations to learn the rudiments of hygiene, made such admirable practical use of her knowledge of the principles thus acquired that she astonished the entire civilized world by demonstrating the possibility of conducting a war on a gigantic scale and under most adverse conditions, in which the deaths and disabilities from disease should be actually less than those from wounds; in which, indeed, the mortality from general causes should scarcely exceed those under ordinary conditions of life. As in war so in peace. It is not enough to possess an intimate knowledge of general laws; we must know how practically to apply these laws. And, more than that, we must possess sufficient self-control, both individually and collectively, to be willing to submit to the enforcement of the legal enactments designed for their application. Of what avail would all the wise precautions of the Japanese army surgeons have been if their troops had, like our volunteers, gorged themselves with all manner of indigestible food and drunk from every wayside pool, instead of confining themselves to the army ration and using only such water as was allowed by the medical officers. The Japanese soldier was so thoroughly a patriot that he was willing to deny himself, and to control his appetites, and he had sufficient intelligence to know that the restrictions placed on him by the authorities were designed purely for his own good and to make him better fitted to serve his country.

SANITARY LAWS NOT ANTAGONISTIC TO TRUE PERSONAL LIBERTY.

It is idle to prate of the enforcement of sanitary laws as an infringement of personal liberty. Submission to reasonable personal restrictions intended for the welfare of all is the very foundation stone of civilized liberty.

The individual who insists on what he is pleased to call his own rights in defiance of law and to the detriment of the common weal is "an undesirable citizen of the republic." If we are to aim, in the language of Dr. Parks, to render growth more perfect, decay less rapid, and life more vigorous, in civilized life we must give up many primitive or individual liberties to insure advanced civilized liberties and to permit a free social and commercial intercourse.

One more factor in bringing about the wonderful achievement of the Japanese army must be mentioned, and that is the high rank accorded to their medical and sanitary departments. In their particular branch of the service these men were supreme. In all great movements they were consulted. Unless a military necessity prevented, they supervised routes of march, sources of water supply and sites for encampment.

DUE RECOGNITION REQUIRED FOR THE MEDICAL AND SANITARY SERVICE.

So long as the medical service is made subordinate or inferior to the strictly military service in our own army, so long will repetitions of the disgraceful slaughters of Camp Alger and Chickamauga be of common occurrence in our military operations. In all matters pertaining to the health of the troops the medical staff of an army should be *the* authority, and in all councils of war their voice should be of equal authority with those of the combatant officers. If, as a great warrior declared, "Providence is on the side of the heaviest battalions," then, other things being equal, success will attend that army whose officers keep the greatest number of fighting men in available condition.

What but the skill of the medical officers of our army makes the present occupation of Cuba by our forces possible without frightful loss of life? What but their knowledge of the mysteries of the transmission of the *Plasmodium malariæ* and the yellow fever micro-organism by mosquitoes revealed to us by the Italian scientists and by Ross and Finlay, and of all the details of the methods of combating those pests acquired in Havana by Major Gorgas and his associates, has enabled us to undertake the stupendous enterprise of the construction of the great waterway by which is to be consummated the union of the Atlantic and the Pacific, and which has converted the Canal Zone from a valley of death into a region in which men can live and labor in health and safety?

Let me not be criticised as dwelling unnecessarily on the subject of military hygiene. The Army and Navy are an essential part of the body politic and what concerns their success concerns the welfare of the nation; but, apart from that fundamental fact, the problems of military and naval hygiene are not only akin to those of civil hygiene, but are often presented in a more concrete form which makes them easier to grasp. Especially is this so with regard to that last suggested. Just as it is the part of wisdom in a general to be guided in all matters pertaining to the health and vigor of his forces by the advice of his medical staff, so it is the part of wisdom in our lawmakers, when called on to legislate on subjects involving questions of health, hygiene or medicine, to consult scientific medical men, men who have devoted their lives faithfully and conscientiously to the study of these matters, rather than to lend an ear to the opinions of men learned in the law, perhaps, but entirely destitute of scientific knowledge, or to the vagaries of quacks and visionaries.

It is a frequent remark that in a representative government health laws can not go far in advance of the intelligence of the people, all of whom, illiterate as well as educated, foolish as well as wise, have the right of suffrage.

And, unfortunately, pseudo-scientists and acute legal gentlemen who are ready, for a consideration, to undertake to prove the worse the better cause on any medical or scientific subject, no matter how profound, swarm in every lobby. For such pernicious intermeddlers and busybodies, the proverb of the old Romans, "*Ne sutor ultra crepidam*," "Let the cobbler stick to his last," would be an effective argument, if any argument could avail against such brazen effrontery. Modesty as a point of attack being barred, is not the suggestion worth consideration that the scientific men who in one way or another occupy official positions in connection with a state government should regularly and as a matter of course be called on for advice in the decision of all questions involving scientific knowledge and training?

Let us give our legislators credit for, in the main, honestly striving to arrive at just conclusions on such questions. How are they to distinguish with any certainty between the false advisers and the true? How judge between the honorable men of science whose only goal is the truth and who seek to promote the public welfare, and the selfish pretender whose end and aim is to fill his pockets from the public purse, or the wild visionary who, deluded by some *ignis fatuus* of his own imagination, seeks to delude others? How, unless the government formally calls on the scientific, thoroughly educated medical and sanitary experts connected with her various services and departments to consider questions of this kind coming before Congress and to advise as to their solution in the interest of the nation's welfare, giving their reasons for such advice? If a provision of this kind were satisfactorily established in connection with the national legislature, the states would not be long in following the example thus set. Still better would be the proposition already advocated more than once by this Association, to establish a Department of Health, with a Secretary of Health at its head who should have a seat with the President's advisors, and who would make it one of his urgent duties to keep legislation of this character under close scrutiny, and to see to it that no member voted wrongly for lack of accurate information and definite explanation as to the merits of a question. The fact that medicine has become a great science and that preventive medicine is one of its most important branches imposes on the government the solemn duty of exercising a wise paternal care for the health of the people so far as the majority will allow.

This will still leave open a great opportunity in this direction for the educated and public-spirited physician; for the intelligence and knowledge of the masses in regard to such matters depend not only or mainly on the little smattering of sanitary knowledge acquired at school in early life, but on the frequent, intelligent imparting of such knowledge by the medical man to his patients. By the sick bed, at the fireside, in the social circle, the physician has constant opportunities of conveying valuable and much needed instruction and of combating the erroneous teaching of fanatics and charlatans.

COMPULSION NOT PERSUASION THE KEYNOTE OF STATE MEDICINE.

Let it be understood at the outset, however, that, no matter how great efforts we may make to educate the

people, unless we have the *lex scripta*, the written law, to fall back on, state medicine, while it may be a beautiful science, can never be a practical art. The limitations of human nature forbid. Under the stress of agonizing illness or in the paralyzing presence of a great epidemic people will be impressed for the moment with the necessity for sanitary restrictions and submit to them with tolerably good grace, but the moment the pressure of fear is lifted from their hearts self-love resumes its supreme sway. We are reminded of the legendary episode in the history of the Great Adversary in which it is recorded that:

When the Devil was sick,
The Devil a monk would be;
But when the Devil got well,
The Devil a monk was he.

No, we must trust to no such temporary amendments or death-bed repentances, but must fairly and squarely recognize the fact that, during conditions of ordinarily good public health, the great majority of mankind are neither wise enough voluntarily to submit themselves to the requirements of sanitary law for the sake of preserving their own health and those of their loved ones, or righteous enough to be willing to exercise self-denial and repress the cravings of avarice to save others from sickness, suffering and death. It is gratifying to be able to record the fact that we have a conspicuous example to the contrary in the great and good Chief Magistrate of this nation who has recently cheerfully submitted to all the irksome requirements of domiciliary quarantine in order that the micro-organisms that produce disease might not invade other homes outside the portals of the White House. His example will do much in this as it has in many other ways to aid in the enforcement of righteous laws.

But the laws we must have. These laws must reach into all the relations of human life. As their basis they must start with the prompt and accurate registration of births, deaths and marriages, and of the presence of transmissible and communicable diseases, and they must embrace the control of epidemics by domiciliary quarantine; the employment of prophylactics and disinfectants; the supervision of the transportation both of the quick and the dead, and the burial of the dead; the construction, heating and ventilation of our homes and public buildings; the protection of water supplies and the restoration to purity of our polluted streams and lakes; the manifold occupations and industries of the people; the protection of food stuffs, including milk and other beverages, and of drugs, from adulteration and impurity; the education of physicians, dentists and veterinarians, and the barring of our doors against the introduction of communicable diseases and pestilences from foreign countries.

To accomplish these manifold and diversified ends, certain of these subjects, such, for example, as the prevention or the pollution of interstate rivers and streams, the prevention of food adulteration and the sanitation of public conveyances on interstate lines of travel both by land and water, must be controlled by federal law. Other subjects, such as the problems of rural and school sanitation and protection of state waters, must be regulated by state law, and still others, such as the sanitation of streets and sewers and the disposal of garbage, by municipal ordinances, each occupying its own legitimate sphere, all working together harmoniously for the common good of the nation.

THE AMERICAN RACE MUST BE PROTECTED.

Only by the enactment of judicious legislation of this kind, and its rigid enforcement when enacted, can we hope to perpetuate a vigorous race of American parentage on this North American continent, a race fired by the lofty ideals of our ancestors and nurtured in their traditions. Consider for a moment what manner of men they were and their object in seeking these shores:

Of whatever faith—Pilgrim or Quaker, Huguenot or Catholic—they came here *for* their faith and with the highest standards of right and righteousness; they were, moreover, men of good social standing in their own lands. In the face of the direst ills, and with the highest courage, they conquered these inhospitable shores and made of this land the granary of the world and, delving into its bowels, unearthed its hidden mineral wealth.

Contrast this type of men with those who form the constantly swelling tide of immigration which, attracted by the success of our efforts, is now sweeping in, actuated by no higher motive than the accumulation of wealth, bearing on its bosom the ignorance, the vices, the follies and the pernicious political heresies of the lowest and most dangerous stratum of European society.

THE LESSON OF HUSBANDRY.

In order to build up a race fitted to cope with these dangerous masses, we must combat the seeds which destroy the physiologic condition of the animal body in the same manner that mankind has always combated the seeds that destroy vegetable life. This latter warfare the human race has always acknowledged as possible and necessary for the preservation of the useful members of the vegetable kingdom.

The wise husbandman profits by the latest discoveries of science, as revealed to him in the bulletins of our national and state agricultural departments in order to determine the nature of the blight that is falling on his crops. He seeks the diagnosis of the disease that is attacking his trees, and seeks it from the men who, having patiently acquired an education in science as applied to the study of the pathology of plant life, have devoted their lives to making further discoveries in this domain.

If he finds his cornfield invaded by that troublesome creeping weed, the Canada thistle, he attacks it with the cultivator, the mattock and the hoe. If the San José or the oyster scale is ruining his orchard he sprays them with boiled lime and sulphur wash. If the tussock-moth is robbing him of his shade, he drenches his trees with solution of arsenite of lead, and if the potato bug is making inroads on the solonaceæ in the vegetable garden he attacks the beetle with Paris green. In each case he searches out the cause of the failing health of the vegetable organism and uses the means for the removal or destruction of that cause which science has taught him will be most efficacious, and he does this with reasonable assurance that health will be restored and life saved.

He knows better than to apply to a lawyer, a cobbler or a tailor for this life-saving knowledge. And yet when the life and health of the animal organism in the form of their loved ones are in peril thousands of otherwise intelligent people in our land scorn the advice of the educated scientific physician and throw to the winds the means and appliances which science has taught may be of service in combating disease, pinning their faith rather to the butcher, the baker, the candlestick maker, or to any nostrum seller, impudent charlatan or miracle monger who pretends to powers of healing. Wherein lies this curious difference between the diseases of vege-

table life and those of animal life that in one the teachings of science must be followed and in the other set aside?

ANTIVACCINATION.

A still more reprehensible neglect to use the means which experience has placed in our hands for fighting disease is found in the case of the antivaccinationists. These misinformed people do not confine themselves to simple neglect of means, but set themselves in direct opposition to the requirements of state medicine having for their object the destruction of the contagion of the most devastating pestilence the world has ever known. It will require persistent vigilance on the part of the members of our profession who know the horrors of that disease to maintain this bulwark against its ravages.

ANTIVIVISECTION.

Another class of well-meaning but misguided persons who plant themselves directly in the way of advance in medical science are known as antivivisectionists. These kind-hearted sentimentalists would permit thousands of children to die rather than that a few dogs should suffer. If a foreign foe should attack our shores, they would send legions of our noble youth out to bleed, suffer and die in order to protect their homes and their possessions. They do not hesitate to make this supreme sacrifice on the altar of so-called patriotism. But if a physician, inspired with an earnest desire to provide a new means for the prevention of human suffering and death, makes an experiment on a dog or a guinea-pig, taking every possible precaution to minimize the pain to the animal, these tender-hearted persons hold up their hands in holy horror.

They do not pause to consider that diphtheria is a more relentless foe than ever carried a rifle or wielded a sword, and that but for experiments on horses tens of thousands of persons would now be sleeping in early graves who are to-day walking the face of God's earth rejoicing in the possession of health and happiness. They do not ponder on the agonizing convulsions which terminate the lives of those bitten by mad dogs and from which so many have been saved as the result of comparatively trifling suffering inflicted on a few animals. The founder of Christianity pronounced that a human life was of more value than those of many sparrows. It is the Hindu who considers the sparrow more valuable than the man. It affords me sincere satisfaction to be able to announce that at the session of the Legislature of my own state which has just concluded, a bill of this kind which would have absolutely put a stop to modern scientific research and would have forbidden the continued manufacture of diphtheria antitoxin, vaccine virus and all the curative and prophylactic serums in the state, after an obstinate struggle, was not only defeated but was dropped from the calendar.

RECENT SANITARY LEGISLATION IN PENNSYLVANIA.

Allusion was made at the opening of this address to recent legislation in Pennsylvania which has opened the way for unusual advances in sanitary administration. It will not be considered inappropriate, therefore, I trust, to refer to this body of legislation somewhat in detail, as some of its features may perhaps be considered worthy of adoption in other states. The first is the substitution in place of a State Board of Health of a Department of health with a single official at its head, under the title of Commissioner, such official having a seat in the Governor's cabinet. The increase in effectiveness due to concentration of authority, coupled with absolute power of initiative, can readily be understood. In only two states and one district had this form of administration been adopted previously, namely, New York, Texas and the District of Columbia, and with very satisfactory results.

The addition of an advisory board whose principal specified duty consists in the preparation of regulations in no way limits the executive powers of the commissioner.

The commissioner appoints all assistants and employés, assigning their appropriate powers and duties. He may issue subpoenas to secure the attendance of witnesses and to compel them to testify. He may issue warrants to any sheriff, constable or policeman to apprehend and to arrest such persons as disobey the quarantine orders or regulations of the department.

PURITY OF STATE WATERS.

Secondly, the same legislature which established the department and gave the commissioner such broad powers also placed directly and specifically under his charge all the waters of the state and laid on him the formidable duty of reclaiming them from pollution in an "Act to Preserve the Purity of the Waters of the State." Under the provisions of this act no new system of water works for the supply of water to the public, and no addition to a system already existing, and no new sewerage system or addition to a sewerage system already existing may be made without a permit from the commissioner, in whose office must be filed certified copies of the plans, surveys and descriptions of such systems.

When an application is received for the introduction or extension of a water works system, whether by a company or municipality, the plans submitted are carefully gone over by the bureau officers in the engineering division, and, after they have familiarized themselves with them, the field officers receive their instructions from the chief engineer for a careful survey of the whole water shed from which it is designed to draw the supply. This report is returned to the chief engineer, who, in turn, submits the same with his comments and suggestions to the commissioner. The officers of the municipality or directors of the company are then requested to meet the commissioner in consultation and the whole subject is thoroughly discussed, after which a decision is rendered. A board, consisting of the governor of the state, the attorney-general and the commissioner of health, is charged with the duty of deciding whether or not the general health of the public would be subserved by granting a request permitting the sewage from any system otherwise prohibited to be discharged into any of the waters of the state, and on such unanimous decision is based the issuance of a permit by the commissioner.

When it is called to mind that the area of the state is about 45,000 square miles, that it abounds in water courses, most of them available as sources of power, that it contains 30 cities, 849 incorporated boroughs and 1,547 townships, with a population of 7,000,000, that under the lax system of legal supervision of sewerage heretofore prevailing in the state all of these centers of population and all of its manifold manufactories and industries, with comparatively few exceptions, have been for years pouring their filth into the streams, nearly all of which are utilized as water supplies, it will be understood, first, how dire was the necessity for the passage of these laws, and, secondly, how immense is the

task thus imposed on the department and what a storm of opposition it must have aroused.

Notwithstanding these untoward conditions, tangible results are already being obtained.

VITAL STATISTICS.

In the third place, Pennsylvania was up to that time without a state system of registration of vital statistics. Its Central Bureau of Vital Statistics possessed little more than a paper existence. Outside of the cities and large boroughs, no record was made of the birth or death of a human being, although associations interested in live stock made it their duty to preserve careful histories of the births and deaths of blooded animals. No death certificates being required before burial, the doors stood wide open for graveyard insurance and the concealment of death by violence or poison. The same legislature, however, removed this blot from the escutcheon of the state by passing an "Act for the Immediate Registration of Births and Deaths." In order to make this law effective in the rural districts it became necessary to appoint nearly a thousand local registrars and two hundred subregistrars. This was accomplished before the end of the year, so that Jan. 1, 1906, found the machinery complete, and in six months from that time Pennsylvania was admitted to the list of registration states by the United States Census Bureau.

During the year ending Dec. 31, 1906, 171,713 births and 122,484 deaths were reported, and the report indexed and bound for permanent future reference.

MORBIDITY REPORTS.

While vital statistics, however, are essential as the basis of all health work, they do not furnish the information needful to enable a department or a board of health to do prompt executive work in repressing the spread of communicable diseases. For this object morbidity reports of that class of diseases are necessary, and those can only be satisfactorily collected through physicians themselves. For this purpose postal cards have been distributed to all the physicians practicing in rural districts, approximating 8,000 in number. These cards contain on the left-hand margin a list of reportable diseases and on the remainder of the face blanks for the various items of information desired. In view of our greatly increased knowledge of communicable diseases and the means for their prevention recently acquired it was deemed desirable to increase greatly the list of diseases to be reported.

Including the returns from cities and boroughs, the entire number of cases of communicable diseases reported during the first year was 87,952. By this method we have been able, so to speak, to keep our finger on the pulse of the state to its remotest corner; and I may add that one of the most gratifying experiences in connection with my official work has been the hearty and prompt response which I have met from my fellow-physicians to this new and somewhat unusual demand on their time and attention. When it is remembered that, in order properly to fill out one of the postal card reports it is necessary to make fourteen distinct entries in addition to date and signature, it will be recognized that the busy practitioner, probably already exhausted with his day's work, is displaying commendable public spirit when he completely complies with this requirement. It should not, however, have caused me surprise in view of my knowledge of the thoroughly altruistic spirit which characterizes our profession.

The value of the aid thus rendered the department in its efforts to prevent the spread of such diseases can not be overestimated.

FREE ANTITOXIN.

One of the first important pieces of information gleaned by the department from its morbidity reports was the extreme prevalence and fatal character of diphtheria in the state, and I soon felt a concern, as my Quaker ancestors would have said, for the young lives which were being so wastefully and so needlessly, as it seemed to me, sacrificed. I knew that many of them could be saved if their parents were able to provide the physicians with antitoxin. From this conviction it was but a step to the belief that it was the duty of the state to furnish it.

To do so with any hope of success it was evident that this remedy must be placed within easy reach of the individual case, inasmuch as promptness in administration is the secret of success. An immense number of depots had to be established and stocked, and the physicians notified of the location of those stations. Reliable men had to be secured as distributors and instructed in the method of distribution. This labor occupied about three months, and the system was inaugurated Nov. 4, 1905. Any respectable physician can obtain the antitoxin, in a sterilized glass syringe with accompanying sterile needle, simply by pledging himself to fill up the blank clinical report, which is contained in the package, and returning it to the department at the termination of the case. He must, of course, assure the distributor that the family is in indigent circumstances and that the product will not be sold.

Since November, 1905, up to March 1, 1907, the number of cases treated has been 4,635 and the number of deaths 445, or 9.6 per cent. The number of exposed persons who have received immunizing injections has been 2,813. The number of those who have contracted the disease after attempted immunization, all of whom recovered, has been 73. It is, of course, quite impossible to estimate how many of the immunized would otherwise have contracted the disease with fatal results. This, of course, would have raised considerably the ratio of lives saved. A liberal calculation shows that, on the average, each life saved cost the state a little over $6. The number of stations at present is 510. The clinical reports must, after a time, furnish data of immense value for the study of this method of treatment of diphtheria. A careful analysis of them is now being made from all the various standpoints. From the point of view of the prevention of the spread of this fatal disease, leaving out of the question the saving of life and prevention of suffering, I can conceive of no more legitimate expenditure of the public funds or one which is more richly remunerative.

ROUTINE RURAL SANITARY ADMINISTRATION.

But, to return to the subject of sanitary administration, morbidity reports, affording definite and prompt information of the presence of communicable diseases in particular localities, are of little immediate practical use unless we possess the machinery for repressing these outbreaks; and reports of nuisances causing pollution of streams have little value unless we have a force by whom these nuisances may be abated. This machinery the department has created by the appointment of local health officers in the rural districts, responsible directly to the Department of Health and dependent on it for their remuneration. There are about 700 such state officers

supervised in their work by the sixty-six county medical inspectors.

DIVISION OF MEDICAL INSPECTION.

The morbidity cards, together with the routine correspondence from county medical inspectors, boards of health, health officers or physicians or others, calling attention to the prevalence of communicable diseases at any particular point, or of disease-breeding nuisances, are first received by the chief medical inspector or one of his assistants. The morbidity reports are usually the first and most reliable indications of an incipient epidemic. Unless the circumstances are of an unusual character, they are at once replied to and the necessary instructions are issued from the medical division. When some unusual problem presents itself or some unusual exercise of authority is necessary the question is referred to the commissioner.

COUNTY MEDICAL INSPECTORS.

The relationship of the county medical inspector to the department is that of a consultant, to be called on to diagnose doubtful cases, to investigate epidemics and to order such enforcement of the regulations as he may consider necessary to protect the public health.

THE STATE HEALTH OFFICERS.

The relation of the state health officer to the department is that of a sanitary agent whose duties are to placard premises where communicable diseases have been reported by a physician; to establish quarantine in manner and form prescribed by the regulations of the department; to furnish the householder with circulars governing the care of the special disease reported; to disinfect, to raise quarantine and to remove placards when instructed by the county medical inspector; to report to the department any alleged nuisances, to make sanitary inspections, arrest offenders against the sanitary laws and regulations and order abatement of nuisances.

The advantage in rural districts, where the people are little accustomed to restraint, of having local health officers directly responsible to the state, rather than to local authorities, can not be overestimated. The state badge carries a weight of authority not conveyed by that of a township constable, and the officer does not hesitate to perform his duties because of the fear of incurring the animosity of his neighbors and so losing his place. On the contrary, he knows that only by the utmost firmness and faithfulness in enforcing the state laws and the regulations of the department can he hope to retain his position.

Cities and boroughs having their own health authorities are, of course, not directly subject to the authority of the department, except in the matter of reporting; but if the commissioner finds that in any municipality the sanitary administration is so faulty that the health of the surrounding districts or of other municipalities is menaced he is authorized to step in and to assume entire control.

Thus we have a state system of sanitary administration complete and symmetrical, its head at the seat of power in the state, untrammeled in the exercise of authority, reaching down through the subdivisions of county and township to the people; and a department in daily touch with every nook and corner of the state through its faithful allies, the physicians of the commonwealth. If it fails to accomplish great things for the health and happiness of the people, it will be the fault, not of the system, but of incompetence in its head.

SANITARY LEGISLATION IN THE SEVERAL STATES IN 1905.

But I have already spent too much time on the legislation of Pennsylvania. Let us for a moment pass in review what has been recently accomplished by other states in this line.

This we are able to do with ease through the special bulletin of the State Board of Health of Rhode Island and the Providence Plantations compiled by Dr. Charles Y. Chapin. Taking the compilation up by subjects and confining ourselves to the more important, we find that in 1905, which appears to have been a year of unusual activity in sanitary legislation, the matters of registration was taken up in some form, either original or amendatory, in eight other states: California, Connecticut, Michigan, Minnesota, South Dakota, Utah, Wisconsin and Nebraska. In five of these states a complete state system was inaugurated. These were California, South Dakota, Utah, Wisconsin and Nebraska. In the remaining three, the acts were intended to remedy defects in systems already existing. These were Connecticut, Michigan and Minnesota. In California, in addition to the complete law for the registration of deaths only, the old law for the registration of births and marriages received several amendments.

A law establishing a state board of health or considerably enlarging its powers was passed in one state, Minnesota.

Acts establishing or regulating local boards of health were enacted in five states: Indiana, Minnesota, Nevada, New Jersey, Oregon. In Nevada and Oregon, county boards of health were created.

Legislation for the better control of contagious diseases was accomplished in seven states: California, South Carolina, Maine, Tennessee, Utah and Wisconsin. In three states emergency funds were established for special use in epidemics. These were Maine, Pennsylvania and Wisconsin.

Hospitals or sanatoria for consumptives were projected, established or aided in eight states: Massachusetts, Michigan, Missouri, Rhode Island, Wisconsin, Georgia, Indiana, New Hampshire.

Acts to regulate the practice of medicine were established in fifteen states: Colorado, Indiana, Michigan, New York, Missouri, South Carolina, South Dakota, Tennessee, Texas, Washington, Wyoming, Florida, Michigan, North Dakota and Wisconsin. The action of Colorado, Michigan, Wyoming, Nevada and Wisconsin in forbidding the granting of licenses, or certificates, or registration to persons guilty of immoral, dishonorable or unprofessional conduct, and empowering the state boards or courts to revoke and annul any license or certificate issued to such persons can not be too highly commended. The fact that in many of our states even gross immorality is no bar to the practice of medicine inflicts a cruel injury on the profession.

Laws regulating the practice of undertaking and embalming were adopted in ten states: Illinois, Indiana, Massachusetts, New York, Pennsylvania, West Virginia, Wisconsin, Minnesota, North Dakota and Oklahoma.

Cigarette smoking was considered an evil of such magnitude as to require prohibition in five states: Arizona, Indiana, Nebraska, Oklahoma and Pennsylvania.

State laboratories for bacteriologic or chemical analysis were established in four states: California, Connecticut, North Carolina, Wisconsin and Pennsylvania.

The practice of the system of healing known as osteopathy was legalized in eight states: Colorado, Indiana,

Montana, Nebraska, Tennessee, South Dakota and New Mexico.

I may here interpolate that an act to introduce osteopathy in Pennsylvania on exactly the same footing with the profession of medicine has just been vetoed by the governor.

The examination and registration of nurses was provided for in four states: California, Colorado, Connecticut and New Jersey.

Seven states adopted more stringent provisions to regulate the sale of poisons and narcotic drugs: Connecticut, Massachusetts, Minnesota, Nebraska, North Carolina, Texas and Wyoming.

An act to provide a method for locating and destroying mosquito-breeding areas has been adopted by the State of New Jersey. This experiment will be watched with intense interest.

This list, of course, could be amplified, but enough has been said to indicate a widespread and intelligent interest in sanitary matters in every section of this immense country. On the whole, it indicates an advance. But any one who is on the ground during a session of a state legislature can not but be struck with the amount of crude, ill-digested and even nefarious legislation of this kind which is presented, and with the necessity for having intelligent medical men on the spot who can watch purely commercial schemes presented under the guise of sanitation and science and inform the legislators of their true character.

An intelligent and conscientious chief executive is, however, often our only bulwark against disaster.

The limitation of tuberculosis by curing the disease in its early stages before it becomes a serious menace to the public health, especially in the case of the indigent, appeals very directly to the sympathies of our people and, as will have been noted, has received considerable attention at the hands of our legislatures.

The scheme which we are outlining in Pennsylvania for this purpose is a comprehensive one. It contemplates utilizing the great forest reservations of the state for the purpose of hospital or sanatorium treatment. It is proposed to have two colonies at widely separated points that they may be accessible from different parts of the state. Instead of massive structures of brick or stone, we shall erect a large number of frame cottages, each of which will accommodate but a comparatively small number of patients. Somewhat apart from these will be an infirmary for those in the more advanced stage of the disease. In this building those to whom we can not hold out hopes of recovery will be afforded shelter and the comforts of a home in the closing days of life, and this extension of relief will be more than justified in the fact that we are removing them from their confined, crowded, ill-ventilated and often impoverished homes at the time when they would be most in danger of communicating the disease to other members of the family and the greatest menace to the public.

After recovery, the male patients will be offered opportunities for work in forestry, for which they will be entitled to their board and clothing, for a sufficient time to test their strength and the reality of the cure. Men whose previous occupations have been such as to create irritating dust, such as saw sharpeners and stone cutters, will be urged to seek permanent work of a less objectionable nature, and patients of both sexes will be counseled to find, so far as possible, opportunities for work in the country.

Entirely distinct from this enterprise, which is so elastic as to be capable of almost indefinite expansion, while it reduces expenditures to a minimum compatible with the best results, is our plan to establish in each of the sixty-six counties of the state a dispensary for tuberculosis, also under the direct supervision of the department of health. The object of these dispensaries will be twofold: First, that many patients who might be unable to leave their homes for a prolonged stay in a sanatorium could frequently come here for advice in regard to matters of diet, medication, when needed, and the open air treatment, so far as it is possible of being carried on at home. Second, they would also receive careful instruction in all the precautions necessary to be observed for the protection of others; and their compliance with these instructions would be made an essential to their continuing to receive state treatment. In fact, "the dissemination of knowledge relating to the prevention and cure of tuberculosis and for the study of social and occupational conditions that predispose to its development" is expressly noted in the act creating the system as one of its important objects. I am proud as a Pennsylvanian to be able to state that our legislature has just appropriated the sum of one million dollars, to be used in the manner indicated, at the discretion of the department of health, and has at the same time authorized the selection of one or two tracts of land, within the boundaries of State Forestry Reservations, to be devoted to this object.

The advances made in other states in this most promising field of state medicine will be watched with the closest attention and every suggestion which promises to make such enterprises more successful and thus aid in lifting this shadow which darkens so many homes, will be taken advantage of. As such plans are being carried out in so many states, why should not we who are entrusted with them join hands in this inspiring work and help each other in solving the problems of our individual states?

While giving one another freely of our best inspirations, let us indulge in a noble rivalry to obtain each for his own state the most successful exhibit and the happiest results. So may we deserve well of the Republic!

Original Articles

THE DIAGNOSIS OF DISEASES OF THE PROSTATE.

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There is no organ in the human body concerning the diseases of which the average physician has less definite knowledge than he has of those of the prostate gland. Yet there are few conditions susceptible of more accurate diagnosis if the various types of its disorders are familiar to the examiner. In the following paper an effort will be made to present a classification and a brief description of the pathology and diagnostic features of these conditions.

Refinement in diagnosing the sub-varieties of prostatitis is not of so much importance in the prognosis and treatment as is the necessity of recognizing the prostate as the source of reinfections and the cause of urinary irritation, sexual weakness or obscure referred pain or symptoms.

When approached in a scientific manner and consid-

ered with due regard for the anatomy and physiology of the gland and its related organs, these affections lose much of their former vague character. They offer an exceedingly interesting field for work on account of the diagnostic accuracy attainable and the success which, as a rule, follows the institution of appropriate treatment.

This paper is based largely on the facts observed or confirmed by the study of 108 prostates. Of these 61 were chronically inflamed, 34 were normal, 5 were acutely inflamed, 5 were hypertrophied, 2 were of the subchronic type and 1 was subacute.

Especial attention will be devoted to the chronic inflammations. Of the 61 of this class 47 gave a history of a previous gonorrhea, which was apparently the main etiologic factor. The remaining 14 were caused by masturbation, prolonged ungratified sexual desire and instrumentation. Fourteen of the patients had urethral strictures. In one patient large numbers of colon-like bacilli were found in the secretion from the prostate; no gonococci could be found nor was the history like that of gonorrhea. The ages of the patients varied from 19 to 50 years, with an average of 30. Only 8 of the 61 gave a history of acute prostatitis. Most of the patients came for treatment of a persistent or recurrent urethral discharge. My experience has been that in the great majority of patients chronic prostatitis and seminal vesiculitis are insidious in their onset and the patient is unaware that his prostate is involved. In fact, many patients will insist that the prostate is not inflamed because there have been no symptoms of a sudden or acute onset or pain that suggests the prostate as the seat of the trouble.

Several of the diseases included in the table of classification are so easily diagnosed that they do not justify much consideration and are given merely to complete the list.

ACUTE PROSTATITIS.
  Parenchymatous.
  Interstitial.

PERIPROSTATITIS.
ABSCESSES OF THE PROSTATE.
  Follicular.
  Interstitial.

SUBACUTE PROSTATITIS.
CHRONIC PROSTATITIS.
  Parenchymatous (catarrhal).
  Interstitial.
  Prostatic urethra and verumontanum.
  Atrophic.

SUBCHRONIC PROSTATITIS.
NEUROSIS OF THE PROSTATE.
HYPERTROPHY OF THE PROSTATE.
  Parenchymatous.
  Interstitial.
    Many subvarieties.

TUBERCULOSIS OF THE PROSTATE.
CARCINOMA OF THE PROSTATE.
SARCOMA OF THE PROSTATE.
SYPHILIS OF THE PROSTATE.
CYSTS OF THE PROSTATE.
CALCULUS OF THE PROSTATE.

Each of the above names indicates the character of the inflammation and to some extent its chief location. The line of demarcation, however, between acute and subacute inflammation or the subacute and chronic is not well marked from a pathologic standpoint, but is mainly chronologic. A much prolonged acute condition is properly classed subacute, while a very persistent subacute is gradually merged into the chronic. The subchronic are those of long duration where there is still an increase in the prostatic fluid with but very few pus cells. Two of the patients clearly belong to this type.

ACUTE PROSTATITIS.

Acute prostatitis may readily be recognized by rectal palpation. The gland is tender, hard and swollen. The induration may be limited to one or more follicles, to one-half of the prostate or it may be uniformly enlarged in its entirety. The mucous lining is chiefly involved at times, and the swelling is not proportionate to the purulent secretion expressed by gentle palpation. (Massage is not indicated in the acute condition.) The infiltration may be extensive in the stroma of the gland, in which case there is much enlargement and perhaps throbbing and pain. In severe cases the inflammation may extend through the capsule into the tissues surrounding the prostate, causing a periprostatitis. By palpation, then, one can detect a hard, fixed, tender condition of the anterior rectal wall. An occasional examination of the prostate should be made during the latter stage of gonorrhea or at any time when there is an increase in the frequency or pain during urination or if there is terminal hematuria. The symptoms of acute prostatitis are too well known to be mentioned here. The point I wish to emphasize is that the prostate should be suspected and an examination made even if the evidence indicating it be only indirect or circumstantial.

PROSTATIC ABSCESS.

Abscesses of the prostate are of two varieties: 1. Those caused by the occlusion of the duct of an inflamed follicle. 2. Those beginning as an area of intense inflammation or a necrotic spot in the interstitial tissue. In either case they may extend and become of considerable size and may rupture into the urethra, into the rectum or into the connective tissue around the prostate. The first variety is more frequent and less serious than the second. As a rule, these follicular abscesses rupture into the urethra and drain through it for a considerable length of time, contaminating the urine with proteid. At first this is serum albumin and globulin, later albumose is found instead. The only reason I can give for this change is that when the secretion is exuding rapidly the serum albumin and pus escape from the prostate before the ferment, infection,* tissue digestion or whatever it is has time to change the exudate into albumose as is the case when the secretion is retained longer. Occasionally serum albumin, nucleoalbumin, albumose and globulin will all be found in the fluid from an inflamed prostate.

After abscesses and certain acute inflammations the gland becomes atrophic and is found to be small and irregular in contour.

SUBACUTE AND CHRONIC PROSTATITIS.

Subacute prostatitis of long duration is comparatively rare and is not difficult to recognize by rectal palpation and an examination of the secretion expressed

*An editorial in THE JOURNAL of the American Medical Association, April 20, 1907, referring to the work of Opie and Barker of the Rockefeller Institute (Jour. Experimental Medicine, March 14, 1907), called my attention to the fact that disintegrating leucocytes liberate proteid digesting enzymes. After a consideration of this subject and a review of the original paper, I have come to the conclusion that this leucoprotease, as it is called, is probably the substance which digests the proteid in the prostate and accounts for the large amount of albumose found in it when inflamed. It has been clearly demonstrated that this enzyme from the polymorphonuclear cells, acting in a faintly alkaline medium, will digest proteid. The prostatic secretion is uniformly alkaline in reaction, when tested with litmus, and apparently forms a suitable medium for the action of this proteid splitting ferment. That there occasionally may be some other factor is suggested by the disproportion in the number of pus cells and the amount of albumose found in a few subchronic conditions where there are scarcely any leucocytes but much albumose.

which contains more pus, as a rule, than chronic prostatitis. One patient had a subacute inflammation, apparently caused by the colon bacillus, which kept about the same for eight months in spite of the treatment, but finally yielded. There was much swelling of the gland and a large number of pus cells were found in the secretion, but there was not the usual pain and frequency in urinating. The sexual function was much weakened, at one time no erections being possible.

Chronic prostatitis is the class in which the largest number of diagnostic errors are made, and especially is this true if the physician depend on palpation alone. An unfortunate idea is prevalent that a chronic inflammation of the prostate necessarily causes enlargement or considerable irregularity of the gland. Palpation alone is unreliable, except in the hands of an expert, if the findings be negative, as the inflammation may be so limited to the mucous lining that the prostate feels apparently normal.

SYMPTOMS.

With a persistent or recurrent urethritis the prostate should always be regarded as the most likely focus of the infection. All symptoms involving the urinary or sexual functions should suggest the necessity of examining the prostate and its secretion. Sexual weakness is frequently seen in these patients; erections may be weak or absent, and ejaculations may be premature or painful, nocturnal emissions are frequent and the discharged semen may be stained with blood; this is more likely if the vesicles are inflamed.

Frequency of urination is found in the severe cases, the pain usually occurring during the act of micturition. Urgency in the desire to void urine depends on the degree of posterior urethritis and is nearly always present to some extent when the prostatitis is well developed. In one patient there were symptoms of urinary obstruction due to an inflamed prostate which were entirely relieved after two weeks' treatment. Referred pain may be found anywhere between the umbilicus and the knees, the most frequent place being low down on the back in the region of the sacrum.

A decided feeling of mental depression occasionally follows prostatic massage which lasts for several hours. I am unable to explain the cause of this, as in other patients just the reverse is observed and they have a feeling of well-being. Neurasthenia and melancholic symptoms are sometimes encountered in chronic prostatitis.

THE PROSTATIC SECRETION.

The prostatic secretion expressed by massage may appear at the meatus or may remain in the urethra and be washed out by the urine. It is on two substances found in the secretion that we rely for an accurate diagnosis; they are pus and proteid.

When the urethra has been flushed previously with clear urine or irrigated with a physiologic salt solution and the drop of discharge obtained from the meatus after massage shows pus cells, then we know the prostate is inflamed. Should the number of pus cells be small the smear must be stained with methylene blue or azur and eosin, after fixing with heat above a flame. The presence of polymorphonuclear cells is characteristic of prostatitis if the urethra as a source of contamination is eliminated. There are large and small cells, resembling the mononuclear lymphocytes, which are found in the normal prostate in small numbers, and for this reason, in a doubtful case, the secretion should be stained. The pus and epithelial cells are frequently more or less degenerated and do not stain clearly. This may be due to the natural process of disintegration, but, judging from the albumose constantly present, it appears more likely that a ferment of some kind is the cause of the change.

The presence of germs in the prostatic secretion, after a thorough urethral irrigation, is not as easily nor as frequently demonstrable as one would be led to suppose would be the case from the history of the recurrences in these patients. I have been able to find them in sufficient numbers to be conclusive in only six of the chronic cases. The secretion from all was not examined nor were any cultures taken. Gonococci were found in three, colon bacilli (?) in two and pseudo-gonococci in one. It seems that virulent gonococci are rarely found after two or three years unless there have been reinfections or severe recrudescences.

I purposely have omitted other well-known substances that are seen in the prostatic fluid in order to emphasize the importance of pus in making a diagnosis. Dead spermatozoa are frequently, but not always, found in the secretion expressed in chronic prostatitis. This, I think, in many of the patients, is due to a low grade seminal vesiculitis.

URINE AFTER MASSAGE.

When the secretion does not appear at the meatus, and the urine before massage is free from pus and that after contains it, we have conclusive evidence that the prostate is inflamed. The vesicles should be avoided if a differential diagnosis between vesiculitis and prostatitis is to be made. If there is pus in the urine, the urethra and bladder should be irrigated with a physiologic salt or boric acid solution and a small quantity of this left in the bladder to be passed after massage.

Another substance equally as characteristic of prostatitis is the presence of *proteid* in the urine or fluid passed after massage. This can be demonstrated easily by making a layer test with the urine superimposed on a saturated solution of magnesium sulphate (9 parts) and nitric acid (1 part). This reaction shows the presence of any proteid by a white ring at the zone of contact. The urine before massage should always be tested to find if it is free from albumin, and if it is not the urine should be voided and the bladder filled with a physiologic salt solution. If the inflammation is slight, only a small amount of urine or fluid should be retained, as the proteid may not be detected if greatly diluted. This test has been positive in 51 patients and negative in 29 with healthy prostates. The kind of proteid present naturally varies according to the character of the inflammation. An abscess draining into the urethra gives a large quantity of serum albumin; this also is found, but less abundantly, along with nucleoalbumin in acute prostatitis. In the subacute, chronic and subchronic inflammations albumose is constantly found alone or combined with nucleoalbumin. The urine must be tested for albumose soon after being passed, as certain changes take place, if allowed to stand many hours, that prevent as distinct a reaction as is obtained earlier. A precipitate is formed which settles to the bottom of the glass, and the urine above shows a less marked reaction than at first. This does not always occur nor am I able to explain the nature of the process.

The heat and acetic acid test will not show up the albumose, as it is soluble when heated to the boiling point and does not even give the cloudiness at about 60 C. (140 F.) as does the Bence-Jones albumose. Nitric or citric and picric acids, if added to the boiled urine,

will cause the albumose to be precipitated when cool. This again disappears when heated. If serum albumin and nucleoalbumin be present, they also may be first deposited in the bottom of the test tube by placing it in a hot water bath (after boiling and adding the acid) to keep the albumose in solution while they are being precipitated. If the tube now be allowed to cool, the albumose settles on the albumin and a very distinct line of demarcation between them and a difference in the quality of the two layers of the precipitate can be seen.

Frequently in chronic prostatitis considerable débris, composed of pus, mucus, phosphates, epithelial cells, spermatozoa, etc., will be passed in the urine after massage. This enables one to make a diagnosis by a macroscopic examination. Cloudiness that persists after the addition of acetic acid nearly always indicates an inflammation of the prostate. Large casts of the dilated follicles may also be observed. These same patients, however, on other conditions may fail to show any macroscopic débris or casts, but will have the amount of proteid considerably increased.

Two patients had a large quantity of albumose with very few pus cells in the secretion. These were followed and studied for some time and were undoubtedly cases of low grade inflammation, for which chronic prostatitis seems to be an appropriate appellation.

PERIODIC ACTIVITY OF THE PROSTATE.

In a former paper on prostatic albumin,[1] etc., I called attention to a periodic increase in the secretion, without any apparent cause, which occurred every two to six weeks. Further observation has enabled me to confirm this in many other patients. The increase varies from two to ten times the amount obtained after massage during the intervals and is sometimes attended with an aggravation of the urethral symptoms. This seemed to be analogous to menstruation in women.

Since writing this paper I have found some interesting facts bearing on this subject in Deaver's excellent monograph on "Enlargement of the Prostate." John Hunter is quoted as having studied the prostate gland of moles, and found that, while it was small and insignificant during the winter—the period of quiescence—in the rutting season it became large and filled with mucus. These observations were confirmed by Owen and by Griffith. The last-named author also found the same changes in the prostate of hedgehogs. My analogy seems borne out by these facts regardless of whether the prostate and uterus be analogues or not.

The general impression prevails that the secretion and débris are cleared out of the inflamed ducts and follicles by sexual intercourse, but from a number of observations I am sure this opinion is erroneous. The watery portion of the secretion probably escapes as part of the ejaculated fluid, but the masses of mucus, phosphates, etc., may be expressed by massage within a few hours after intercourse, showing that the so-called "active or physiologic massage" is not always to be relied on to clear out the follicles. This, I think, is the reason why many patients are not as much benefited by coitus as they are lead to expect by their genito-urinary surgeons. The seminal vesicles and ampullations of the vas deferens are emptied to a much greater extent than is the inflamed prostate.

A study of the proteid secretion from the prostate, if carried out as a routine in the examination of the hypertrophied gland, may add new facts to our theories as to whether or not gonorrhea is a factor in causing the enlargement, as the proteid is found at times after the pus has almost entirely disappeared. The semen contains a proteid similar to that of prostatic origin which is always present to some extent, but is greatly increased if the vesicles are inflamed.

Neurosis of the prostate is occasionally seen after all the inflammatory symptoms have subsided and is probably due to the exaggerated or perverted impressions transmitted from the rich supply of nerves found in this region. The inflammation seems to be the primary cause, but the pain and irritation outlast the pus and shreds. Difficulty in urinating may at times be observed. Massage does no good, but cold sounds and the psychrophore are more beneficial.

OTHER AFFECTIONS OF THE PROSTATE.

Hypertrophy of the prostate is not difficult to diagnose by rectal palpation, the history of urination gradually becoming more frequent and difficult, after the age of 50, worse at night, the deep urethra lengthened, residual urine present, etc. It is not within the province of the paper to go further into a discussion of the subject of enlargement of the prostate except to urge the importance of recognizing the difference between it and inflammation of the prostate. An hypertrophied gland may become inflamed and give all the symptoms of prostatitis intensified by the urinary obstruction. Acute prostatitis and much less frequently chronic prostatitis may cause urinary obstruction. There is a well-marked difference between these conditions which should always be considered in the diagnosis and treatment. The history, a careful rectal and perhaps urethral examination, a microscopic study of the secretion and a chemical examination of the urine passed after massage of the prostate will enable one to decide which is primary, the hypertrophy or the inflammation.

Tubercular prostatitis is sufficiently like that of gonorrheal origin to make a diagnosis difficult in certain instances. In tuberculosis there may be evidence of the disease in other organs, as the lungs, joints, bones, kidneys and especially in the testicles. Tubercle bacilli in the secretion would, of course, be conclusive, but they probably will not be found. Injection of the fluid into the peritoneal cavity of a guinea-pig would be more likely to clear up the case. The swollen part of the gland is usually larger, rounder and harder than in ordinary chronic inflammation. There may be a history of gonorrhea or secondary infection to add further to the confusion.

Carcinoma of the prostate has two characteristic symptoms, severe pain independent of urination and stone-like hardness. There may be marked irregularities on the rectal surface and the mucous membrane may be adherent. As the disease progresses there is infiltration of the surrounding tissue. Abundant and widely disseminated bone metastases may occur. Casper thinks the pains are evoked through the compression of the nerve trunks by the tumor and its metastatic swellings. These patients steadily grow worse, becoming pale and emaciated. They are only saved by an early diagnosis and a radical operation.

Syphilitic enlargement of the prostate is rare, but should be thought of when no other cause can be determined, and especially should antiluetic treatment be tried if other measures fail and there is a history of syphilis.

1. Prostatic Albuminuria not an Infrequent Cause of Error in the Diagnosis of So-called Orthostatic, Postural, Physiologic and Cyclic Albuminuria, N. Y. Med. Jour., Feb. 24, 1906.

CONCLUSIONS.

The prostate gland is without doubt the cause of the majority of obscure urinary and sexual symptoms and should always be examined where there is any uncertainty as to their origin.

Among the factors that tend to perpetuate a chronic or recurrent gonorrhea a nidus of infection or irritation in the prostate is the most frequent cause. It is in this variety of prostatic inflammation that the largest number of errors are made in the diagnosis.

Palpation, pus and proteid are the three things to rely on in reaching a conclusion as to the condition of the prostate. By palpation through the rectum, the gland, if diseased, may be found enlarged, nodular, irregular, boggy or apparently normal. Pus in the secretion expressed from the meatus or found in the urine or fluid voided after massage, when the urethra and bladder are excluded as possible sources, is positive proof that the prostate is inflamed. Proteid in the fluid passed after massage is equally as reliable as pus in the diagnosis of prostatitis.

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THE DIAGNOSIS OF PYELONEPHRITIS

BASED ON THE ABNORMAL RETENTION AND THE DELAYED EXCRETION OF METHYLENE BLUE.*

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The following report on what I believe to be a useful differential diagnostic symptom between simple involvement of the pelvis of the kidney and involvement of the pelvis and the parenchyma of that organ, is preliminary to a more detailed publication based on further clinical and experimental data.

There are two types of pyelitis, acute and chronic. In both the parenchyma may be involved, as autopsy of such cases shows. How can we determine whether the parenchyma is involved?

As far as one can judge from the literature there is no symptom which reliably differentiates between pyelitis and pyelonephritis. A patient, without palpable kidney tumor, without tenderness over the kidney areas, is suffering from a chronic pyuria. Despite careful bladder irrigations and in some cases despite drainage of the bladder (3 cases reported by Osler), the pyuria continues. Cystoscopy shows a chronic cystitis and by means of ureteral catheterization it is found that pus is passed from one kidney, whereas from the other the secretion is normal. Examination of the specimen from the diseased side shows a faint trace of albumin and considerable pus. Does this pus come from the pelvis or from the pelvis and the kidney parenchyma? Are we face to face with a chronic pyelitis or a chronic pyelonephritis? That question crops up in every case, and such cases are by no means rare.

In the literature there are no definite aids that I know of to assist in this differentiation. In the two cases that are to be reported, I think I have found a differential sign which will throw some light on this question and probably help us in differentiating between simple pyelitis and pyelonephritis with formation of multiple suppurating foci in the kidney parenchyma.

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CASE 1.—*History.*—Mrs. W., aged 35, married; has two children; was operated on for anal fistula six years ago. She had cystitis for some time, for which she was treated. About March, 1904, she developed an ascending infection of her left kidney with chills, high fever and pains in left lumbar region. No kidney enlargement and only slight local tenderness. Operation was disadvised because of poor general condition. She was treated with the usual measures and for several weeks during this illness was put on methylthionin hydrochlorid (methylene blue). Gradually the patient improved and the fever disappeared. The pains became less and slow convalescence set in. Her pyuria and bladder irritability persisted despite regular bladder irrigations, and ten months after the onset of the acute symptoms, I had an opportunity to make an inspection of her bladder and catheterize her left ureter.

Cystoscopic Examination.—Dec. 29, 1904, the bladder showed marked thickening of the mucosa, which was thrown into folds. Left ureteral orifice red and swollen. Bladder excessively irritable. Urine from left kidney was rapidly excreted and neutral in reaction. It contained pus cells, epithelial cells; no casts, no tubercle bacilli. Colon bacilli were present. As there was no mass in the kidney region and no tenderness on deep pressure, it was assumed that the pus came from the kidney pelvis and that the acute pyelitis of earlier date had become a chronic pyelitis. With this diagnosis in mind, lavage of the left pelvis was determined on and measures were taken to diminish the vesical irritability. At this time every specimen of urine was bottled and labelled in order of voiding. On standing, one-half to one inch of pus almost regularly deposited in a six-ounce bottle. In some bottles there was more pus than in others, and it was observed that occasionally there was very little and again at other times a great deal of pus.

On Jan. 2, 1905, the left kidney pelvis was irrigated with boric acid followed by silver nitrate. No effect was noted.

Jan. 19, 1905: Lavage was discontinued, as patient had her menses and a mild attack of influenza. On this date I noticed that the pus deposited in one of the bottled specimens was stained blue, while the supernatant fluid was yellow and unstained. The appearance of this blue immediately suggested methylthionin hydrochlorid (methylene blue), and to determine absolutely what this was I made various tests and microscopic examinations.

Examination of Pus.—Professor Giess of the department of physiologic chemistry, Columbia University, very kindly examined this blue pus, as well as other similar specimens passed at subsequent times, and reported as follows: "The urinary sediment was very blue, so that the quantity of pigment was relatively large and easily handled. The pus varied considerably in its coloration, many corpuscles appearing to be entirely uncolored. Others were deeply colored. Many of the latter were disintegrated into granular débris. The pigment was undoubtedly methylene blue, as shown very distinctly by its response to reducing and oxidizing agents. It was easy to convert the color to the leuco-methylene blue condition and this in turn to methylene blue. I gave no attention to solubility tests, but aimed directly at the main point. No doubt combinations of the pigment in the pus interfere with the usual solubility tests, but by treatment with acids any such combinations were broken and the tinctorial effects above referred to obtained."

Here, then we have a patient who discharges methylene blue stained pus, eight to nine months after administration of the drug. That there is no question of fraud is self-evident, as the pus alone is stained while the supernatant fluid is unstained. Moreover, the blue stained pus is limited almost completely to one specimen. Both these facts preclude deceit on the part of the patient. Where did this blue stained pus come from?

It is evident that the bladder, as well as the kidney pelvis, could be excluded from our reckonings. The bladder had been irrigated countless times and inspected several times—the pelvis also had been irrigated. The assumption was forced on the patient's physician, Dr.

Sternberger, and myself, that the pus must come from small abscesses in the kidney parenchyma. The small amount of blue stained pus pointed to a small pus focus. In other words, the diagnosis of chronic pyelitis was inaccurate. The patient was suffering from pyelonephritis. The methylene blue administered during the acute attack had apparently been stored in the developing parenchymatous abscesses. One of these had ruptured into the pelvis and blue stained pus appeared in the urine. This explanation also fitted in with the observation that there was frequently marked variation between the amounts of pus in consecutive specimens without signs of ureteral obstruction.

Subsequent History.—These deductions naturally compelled us to stop lavage of the pelvis and to direct our efforts to the patient's general condition, hoping in this way to obtain a beneficial effect on the diseased kidney. The general health improved markedly, and frequently for several days or even weeks the pus content of the urine was almost negligible.

On the following dates in 1905, to our knowledge, methylene blue stained pus reappeared in the urine, almost all the specimens being examined for the first two or three months, and thereafter only those voided during three to four days of each month.

Pus stained with methylene blue appeared in specimens voided on January 28, 1 specimen; January 31, 2 specimens; February 17, 1 specimen; March 3, 1 specimen; March 17, 1 specimen; July 8, 3 specimens; October 13, 1 specimen.

Second Cystoscopic Examination.—On Jan. 1, 1906, I again made a cystoscopic examination and found that the left half of the bladder near the trigonum was slightly congested and the mucosa thrown into folds. The right half of the trigonum and right ureter were perfectly normal. The left ureteral orifice was irregular in shape, open and rigid. There was no ulceration. Both sides discharged regularly. The urine now contained much less pus, no casts nor albumin, specific gravity 1.010. Total amount for twenty-four hours was about 100 ounces.

In 1906, specimens with blue stained pus appeared repeatedly. I have notes of such reappearance on several occasions. The last reappearance was on Dec. 15, 1906. Throughout this time the patient's general health had improved and she had gained some 20 pounds. She was able to do everything she wanted. The only restrictions placed on her related to diet. The urine toward the end of 1906 still contained small amounts of pus and was almost free from albumin and of low specific gravity, because of the large amounts voided.

On March 19, 1907, the patient was again carefully examined. Cystoscopy showed an almost normal bladder. The ureteral orifices were normal. About the left there was the slightest congestion. Ureteral catheterization was readily done. Dr. Sondern made the following report on the specimens obtained:

The left kidney apparently secreted more rapidly than the right. The urine was less concentrated than the right. There was blood in both specimens and a trace of albumin. There was a small amount of pus in the specimen from the left kidney. Bacteriologically, this specimen was sterile in various media up to ninety-six hours. The phloridzin test was negative on both sides in the first thirty minutes after injection.

In this abstract I have left out all details that do not bear directly on the point in question—i. e., the diagnosis of involvement of the parenchyma in pyelitis cases. In this patient we have seen a recurrent discharge of methylene blue stained pus at various periods after the administration of this drug. There was no regularity in the discharge, as far as time was concerned. The first specimen thus stained that was noted was passed eight to nine months after the primary excretion of methylene blue stained urine had ceased. Again and again other specimens were discharged, stained with the same pigment. The last time such excretion was noted was 2¾ years after administration of the coloring matter. This phenomenon is in itself worthy of careful consideration, as it is well known that methylene blue administered by the mouth disappears from the urine in three to six days. After such administration the urine holds the methylene blue almost wholly in solution. On the other hand, in this case the methylene blue is not in solution, it is more or less fixed to the pus cells and it has been, so to speak, shut up in the organism for several months, even years.

CASE 2.—*History.*—Mr. M., aged 45. Had gonorrhea ten years ago, since which time urine had been turbid. Chancre nine years go. Operated on twice for hemorrhoids. Complained of turbidity of urine, loss of appetite and weight. Had never had pain, no marked increase in frequency of micturition.

Examination.—The general physical examination was negative. There was no tumefaction or tenderness in the kidney regions. The urine contained a large amount of pus. Specific gravity 1.024; alkalin reaction; moderate amount of albumin; no casts; no gonococci nor tubercle bacilli.

Jan. 5, 1907: Five grains of methylthionin hydrochlorid (methylene blue) given. In twenty-four hours the coloration of the urine disappeared. On January 7, cystoscopy showed marked thickening of the mucosa, which was thrown into folds. Swelling of the trigone. Two small hemorrhages close to the right ureteral orifice. Left ureter normal.

Diagnosis.—Chronic cystitis.

Therapy.—Bladder irrigations every day; hexamethylenamin (urotropin), etc.

Jan. 18, 1907: Urine had not improved despite local therapy. On this date, 12 days after methylene blue had disappeared from the urine, it reappeared in one specimen, which contained a deposit of blue pus. On the strength of this, the diagnosis was changed, and I thought that the patient had in all probability suppurative pyelonephritis. I was not absolutely satisfied, as yet, that the condition was more than a chronic pyelitis, though the diagnosis of pyelonephritis was naturally uppermost in my mind, and to rule out chronic pyelitis, the following measures were adopted on Jan. 27, 1907:

Cystoscopy and Bilateral Ureteral Catheterization.—The bladder was somewhat more injected. The hemorrhages about the right ureter had disappeared. The catheterized specimens were as follows:

	Right Kidney.	Left Kidney.
Amount secreted in 5 minutes	3 drachms	1 drachm.
Phloridzin test (gr. 1/10)	Positive in 24 mins.	*Positive in 18 minutes.
Urine	Cloudy	Clear.
Reaction	Acid	
Specific gravity	1.026	1.018.
Blood present	Positive	Negative.
Albumin	Moderate amount	Negative.
Urea	2½ grs. to the oz.	6 grs. to the oz.
Microscopically	Numerous pus cells.	Negative. No casts.
Bacteriologically	*Bacillus coli communis.*	

This examination showed that the trouble was on the right side. Meanwhile the patient's condition remained unchanged. There was no rise in temperature, no pain, and a fresh test with methylene blue was begun. On February 5 I gave the patient for four consecutive days 3 grs. of this drug three times daily, and by February 11 all traces of the methylene blue had disappeared. As the diagnosis still might rest between chronic pyelitis and chronic pyelonephritis, I washed out the pelvis of his right kidney three times in one week without any effect on the pyuria and without recovering any methylene blue. At last lavage I collected a specimen from the left kidney, and in this casts and albumin were found. On the strength of the negative results of lavage and on the fact that the left kidney was beginning to show signs of a probably toxic influence, I decided to do a nephrotomy.

Nephrotomy.—On Feb. 21, 1907, this operation was performed. The kidney was very large and the seat of the multiple small pus foci. The pelvis was full of pus and contained a large coral-shaped calculus. The size of the organ and its adhesions made the operation a difficult and bloody one. The

*First specimen examined.

subcapsular abscesses were yellow. The pus in the pelvis was similar in color. There was no sign of methylene blue in its blue state. The diagnosis of pyelonephritis was thus verified at operation.

After this operation the patient did very well and the nephrotomy wound gradually closed. On March 17, 1907, there reappeared a methylene blue stained specimen. Since February 11 there had been no sign of this coloring matter. During the following week two other specimens of blue stained pus appeared.

Nephrectomy.—As the wound in the kidney closed the patient ran high temperature, which finally, on April 8, 1907, demanded a nephrectomy. The kidney was completely changed. Instead of a large solid organ with multiple small abscesses, the kidney was converted into a large, soft, fluctuating organ full of pus, a pyonephrosis, with a newly formed conglomerate calculus in the beginning of the ureter. In the remains of the kidney there were none of the old parenchymatous abscesses. In the large quantities of pus that were lost during the operation, no blue discoloration was noted. Unfortunately, all this pus was not collected for chemical examination, as it is more than probable that the methylene blue is deposited in its leuco form, and does not betray its presence by its typical blue color.

If this case be analyzed as to the source of the blue stained pus it at once becomes evident that it could not come from the bladder, as that organ had been very frequently irrigated and also inspected with negative results. From the pelvis it could not come, as this, in addition to being irrigated repeatedly, had also been opened by direct incision and drained. The only possible source that is left us is in the multiple small abscesses in the kidney parenchyma.

Before closing there are several points that I wish to refer to briefly. I do not know whether the methylene blue is excreted in these cases in the blue as well as in the white form. I am inclined to think, but am by no means sure, that it may be excreted in either form, for I have noticed that specimens which I looked at shortly after passage were blue and became bluer and bluer on standing, the white or leuco-methylene blue being gradually converted into the blue form. Another peculiarity occasionally noted was the breaking up of the chemical combination in which the pigment was bound and the progressive staining of the supernatant fluid; this conversion of the fixed and insoluble methylene blue into a soluble substance probably resulted from the action of bacteria, as in specimens bottled with chloroform such changes never occurred.

These remarks will give some insight into the difficulty of recognizing the pigment as it is deposited in the tissues. That we can not rely on its blue color alone for its recognition is evident, for it is more than likely that it is fixed in the pus, etc., in its leuco form. In the kidney that I removed in Case 2, the material was so changed that it was unsuitable for the proper elucidation of this point. Up to date my experimental work along these lines is not ready for publication; still this work indicates, as you will see in the specimen later referred to, that the pigment is deposited in great part, if not wholly, in its leuco form.

The last point that I wish to refer to relates to the time and manner of the deposition of the methylene blue. I feel sure that it is not found in all abscesses of the kidney, as I have had occasion to examine some pus from large abscesses after administration of the drug and failed to recognize the pigment. More than likely the presence of methylene blue in the abscesses is the result of the excretion of the renal epithelial cells. One might suppose that the ascending infection in the collecting tubules leads to a stenosis behind which the methylene blue is excreted and the developing abscess thus receives its quota of pigment.

As evidence in favor of this view, I would show these specimens taken from a dog, in which I had produced an ascending pyelonephritis. Methylene blue was administered daily for several days following the operation and the kidney was removed about two weeks later. This specimen when fresh showed very little pigmentation, but after treatment with oxidizing agents, even after fixation in alcohol, shows, as you can readily see, multiple grayish-blue pus foci throughout the organ. These areas lose their color if treated with reducing agents and regain the same on subsequent oxidation.

On the other hand, as yet, I have not recognized the pigment in the pus of old thick-walled abscesses. If such old abscesses progress and involve adjacent tubules, I naturally would expect to find methylene blue in goodly amounts in them, provided my explanation of this whole phenomenon is correct.

SUMMARY.

If, then, I should summarize the above clinical and experimental data, I would state:

1. There is no differential diagnostic sign between simple pyelitis and pyelonephritis.
2. Pyuria from the upper urinary tract may be due to either of these conditions.
3. By the use of the above described methylene blue test it would seem that a differential diagnosis may be made.
4. Methylene blue is deposited in the parenchymatous abscesses and may be stored in these for years.
5. A late discharge of methylene blue, bound to the pus, is indicative of the rupture of such parenchymatous abscesses into the pelvis of the kidney, and is consequently diagnostic of pyelonephritis.

MENINGOCOCCUS SEPTICEMIA.

DEMONSTRATION OF THE MENINGOCOCCUS IN THE BLOOD SMEAR.

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The number of cases of meningococcus infection in which the organism has been found in the blood is as yet rather small, and the one described below, in which it could be demonstrated directly in the blood smear taken from the ear, so far as I have been able to ascertain, is the only one now on record.

Patient.—A man, aged 27, whose family and previous personal history contained nothing of importance. He had been in good health until the night of March 19, when he complained of pain in the head and neck and also in the joints and muscles. He was nauseated, but did not vomit. Within the next days the headache became progressively worse and very severe. There had been no distinct chill, but fever up to 104 F.

Examination.—He was admitted to Dr. Futcher's[1] service at the St. Agnes Hospital at 11:30 p. m. March 23, in a condition of marked stupor, from which he could be aroused only with difficulty. When I saw him, March 24, about noon, he was profoundly unconscious. There was marked dyspnea; the pulse was just perceptible at the wrist. On both feet, over the flexor surfaces of both forearms and the anterior surfaces of the legs there were numerous ecchymoses. The man's face was mark-

1. I am indebted to Dr. Futcher for permission to use the clinical notes referring to the patient.

edly cyanotic, and about the nostrils there was an abundant herpetic eruption. There was evident rhinitis and conjunctivitis. Kernig's sign was present, as also moderate retraction of the head. On lumbar puncture, a small amount of hemorrhagic, markedly turbid fluid was obtained. Death occurred about an hour later. An autopsy unfortunately could not be obtained.

Examination of the Fluid.—In the meningeal fluid, coffee-bean shaped diplococci could be demonstrated both within and outside of the cells, which latter were almost all polynuclear elements. The organisms were not numerous, however. Some were small, others presented a swollen appearance, while a few occurred as tetrads.

Blood smears showed a leucocytosis of high grade—50,000 at a conservative estimate, with the following relative values: Small mononuclears, 17 per cent.; large mononuclears, 21 per cent.; polynuclear neutrophiles, 62 per cent.; eosinophiles and mast cells, none in a count of 500 cells. Fully 8 per cent. of the leucocytes contained diplococci, which in their morphologic habitus could not be distinguished from those found in the meningeal fluid of this case, nor from diplococci isolated by culture from other typical cases of meningococcus meningitis. Like these, they were Gram negative. It is noteworthy that the large mononuclear leucocytes were engaged in phagocytosis almost to the same extent as the neutrophiles. While in the majority of the phagocyting cells only one or two pairs of diplococci were seen, others were literally studded with them. One large mononuclear contained 26 pairs, and a neutrophile between 50 and 60 pairs. Extracellular organisms were also encountered, but were not numerous.

The bare figures give hardly a proper idea of the extent of the septicemia. But calculating the degree of leucocytosis at at least 50,000 cells in each c. mm. and that 73.8 pairs of cocci were found in 500 leucocytes, it would follow that in one c. mm. of blood there were 7,380 and in one cubic centimeter 7,380,000 diplococci, the vast majority of which had been disposed of by phagocytosis. As a general rule the organisms were well preserved and stained deeply with methylene blue, but in some cells they were greatly diminished in size and manifestly undergoing dissolution. Many neutrophiles were vacuolated to a considerable extent, suggesting that digestion of the cocci had occurred in the vacuoles; in some, indeed, basophilic débris could still be discerned (see illustrations).

Similar appearances were seen in some of the large mononuclear leucocytes, which latter were also engaged in the phagocytosis of red cells. The increase in both the relative and absolute number of these latter is especially noteworthy. In the relatively small number of meningococcus meningitis cases (10) in which I have made differential counts before, I did not meet with this feature. There was always a polynucleosis of high grade with low mononuclear values. It would be tempting to bring these cells into a connection with a possible proliferative endarteritis, but in the absence of an autopsy this hardly seems warrantable. The significance of their presence and identity must hence remain an open question.

REVIEW OF LITERATURE.

The first case of meningococcus septicemia in which the organism was found in the blood (by culture) is reported by Gwyn.[2] The patient was a man, aged 24, with symptoms of meningitis, swelling and redness of both elbows, the right wrist, the right knee and several of the smaller joints of the hands. Growths were obtained on the day preceding death (the fifth of the disease) from the meningeal fluid, the pus from the knee joint and the blood.

2. Bull. Johns Hopkins Hosp., June, 1899. This case is also reported by Osler, Boston Med. and Surg. Jour., vol. cxxxix.

The second case is reported by Salomon.[3] There were symptoms of meningitis, associated with pain and swelling of several joints (wrists, elbows and ankles). The organism was cultivated from the blood on the eighth day of the disease and was also demonstrated in the meningeal fluid.

In his communication Salomon also refers to a statement by Jäger[4] to the effect that in one case he had been able to cultivate the meningococcus *intra vitam* from the urine.

The third case is described by Warfield.[5] There were no definite symptoms of meningitis, but at autopsy (brain not examined) an acute ulcerative endocarditis was found. The organism was isolated by culture from the blood during the life of the patient (about the twenty-sixth day of the disease) and postmortem from the vegetations on the valves. This case is the first recorded in which the meningococcus was demonstrated to be the cause of a malignant endocarditis.

Blood in meningococcus septicemia.

Two additional cases are reported by Martini and Rohde.[6] In both meningeal symptoms were observed, but in the one they only appeared after three or four weeks of general illness. The organism was isolated from the blood in both cases. Their demonstration in bouillon cultures deserves especial mention. A series of bouillon tubes were inoculated, each with about 2 c.c. of blood and incubated at 37.5° C. After sixteen hours the organisms were found—many of them intracellularly in leucocytes. The search was greatly facilitated

3. Berlin klin. Wochschr., 1902, No. 45.
4. Die epidemische Meningitis als Heeresseuche, Coler, Berlin, 1901.
5. Warfield: University of Penn. Medical Bull., July-August, 1903.
6. Berlin klin. Wochschr., 1905, No. 32.

by centrifugalizing the bouillon cultures containing the blood and examining the leucocytes in the surface layer of the centrifugate.

The writers are manifestly not aware of Gwyn, Salomon and Warfield's findings, as they regard their cases as the first in which the meningococcus has been demonstrated in the blood.

The only additional cases in which this demonstration has apparently been made are two instances of meningitis, recorded by Follet and Sacquépée.[7]

Including my own there are thus only eight cases in which the meningococcus has been found in the blood. This is a remarkable fact considering the large number of cases of meningococcus meningitis which have been observed within the last few years; but it may find its explanation in the small number of blood examinations which have probably been made, as contrasted with examinations of the meningeal fluid in which the demonstration of the organism is no doubt more likely to lead to a definite result. Considering, however, that in the meningeal fluid even negative findings are not unusual, it seems advisable in all doubtful cases to resort to blood examination also. Martini and Rohde's method should be tried, besides cultivation on blood serum, hydrocele agar and blood agar. My own observation I am inclined to view as a curiosity only and as not likely to be duplicated except on rare occasions. Nevertheless, a careful search should be made, which occasionally may lead to a fruitful result, and it is possible that by working with large drops of blood and Ross' dehemoglobinizing method positive findings may be more frequent.

Special Article

WATER SUPPLY AND PUBLIC HEALTH.

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(*Concluded from page 1863.*)

CHAPTER VII.

ARTIFICIAL METHODS OF WATER PURIFICATION.

(*a*) *House-Filters.*—The purification of water by artificial means as distinguished from natural or so-called self-purification may be accomplished in various ways. The use of domestic or house filters for this purpose has obtained wide extension, especially in countries where public water supplies are known to be impure. Some of the articles styled as filters or purifiers and sold as such have little value, and if they accomplish anything at all merely remove excessive color or turbidity from the water without materially increasing its safety. The principle underlying the operation of all of the better class of house filters is essentially the same, the actual straining out of the bacteria contained in the water. It needs no argument to show that only those filters made of exceedingly compact material can achieve the end desired. Through filters of loose or coarse material bacteria can pass freely without let or hindrance. Among the best known filters composed of compact material with fine pores through which the water is forced under pressure are the Pasteur-Chamberland and Berkefeld. Both of these types have been repeatedly demonstrated to be efficient when operated under the conditions obtaining in a bacteriologic laboratory, and it has been found that many of the cylindrical tubes of baked clay or of infusorial earth, when properly attached to a water tap, will continue to yield a nearly germ-free effluent for some days. It has been repeatedly demonstrated, however, that not all of the tubes put out by the manufacturers of even the best types of filters present an impassible barrier to the passage of bacteria. This is true even when the tubes are properly sterilized at the outset and are connected and handled with suitable precaution. A recent investigation by Pfuhl[23] has served to bring into sharp relief the impossibility of depending on an untested filter tube to furnish a germ-free filtrate. Phosphorescent vibrios and colon bacilli suspended in water appeared in the filtrate in a very short time in some of Pfuhl's tests. Great variation was noticed in the permeability of the different cylinders. A more vigorous application of suitable tests on the part of the manufacturers before allowing their tubes to be placed on the market would doubtless help to remedy this condition.

There is no doubt that a considerable, if varying, degree of safety is attained by the use of the best filters. Where such filters have been employed on a large scale, as in the well known case of the military garrisons in certain French cities, a decrease in typhoid fever among the filter users has been shown to occur. Few will question that where the small filters are controlled by bacteriologic tests and operated under careful supervision, they constitute a very efficient safeguard against water-borne disease. Under actual conditions in the household and elsewhere, the use of the best compact porous filters sometimes presents certain difficulties. The following quotation from a recent paper on military hygiene[24] illustrates this point: "It might be thought that nowadays most people understood the proper use of filters on the Pasteur principle;

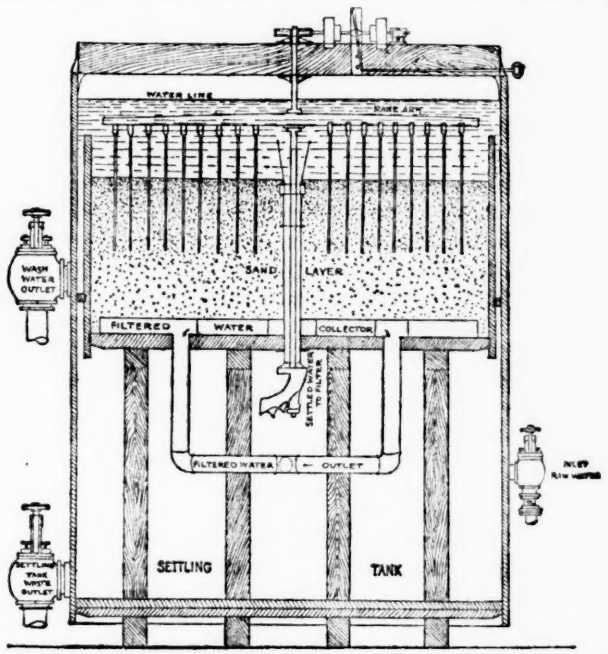

Fig.—3.—This shows a section through a common type of mechanical filter. The cleansing of the sand is accomplished, at short intervals, by agitation with a revolving rake. The tank in the figure is about 12 ft. in diameter.

it has, however, been found that in regimental soda water factories in India (managed and supervised by regimental officers), where the water was known to be dangerous, and in need of efficient filtration, the filter bougies have been fixed in such a way as to permit of the water passing through the joint, instead of through the wall of the bougie; this being done in order to get a more rapid flow." The yield of these filters, particularly and necessarily those of the more efficient types, is always scanty, and if the details of connection and cleansing are entrusted to unskilful or negligent hands the proper operation of the filter may be rendered entirely futile. Not a little time and care are needed to insure that a battery of these tubes in a large school or factory is kept continually in efficient working order. Daily inspection of trustworthy and experienced persons is indispensable, and bacterial tests should be made at frequent intervals. The report on filters by a committee appointed by the French Academy of Medicine (1903)

7. Presse médicale, 1906, No. 6.

23. Festschr. f. R. Koch, 1903, p. 75.
24. Davies, Jour. of the Royal Army Med. Corps, 1904, 2, p. 706.

lays emphasis on some of the difficulties of filter management on a large scale: "During fifteen years, a large number of filters have been used in barracks and hospitals; they have proved to be wonderfully serviceable. But they require minute attention; and every fortnight the taking to pieces, cleaning inspection and replacement of perhaps 150 fragile tubes and receptacles. In default of such attention, the filters rapidly become useless, or even dangerous.

"Sterilization by heat is a recent invention. The apparatus employed has already produced excellent results, and is very favorably regarded. Pathogenic germs are absolutely destroyed, and the sterilizing power is not subject to such limitations as that of filters, which are liable to become dirty and obstructed, as well as to cracks and breakage. The action of the sterilizers is continuous, night and day, and requires very little supervision; only a few are needful, and they can be satisfactorily cleaned, every two or three months in a few hours by an armourer's assistant. A longer experience may perhaps reveal certain inconveniences and disadvantages, but while retaining filters a large number of sterilizers should be employed, and a final judgment should be deferred until some years have elapsed."

(*b*) *Slow Sand Filtration.*—(Note: This section is omitted here, since a special article on sand filtration has appeared in THE JOURNAL, Oct. 3, 10, 17, 24, 1903.)

(*c*) *Mechanical Filtration.*—Many of the smaller cities in the United States have adopted for the purification of the public water supply some one of the numerous methods or devices of mechanical filtration. It is estimated that in the United States at the present time a total population of over 2,000,000 is supplied with water treated by mechanical filters. The ordinary type of mechanical filter is an iron or wooden cylinder filled with rather coarse sand through which water is driven with pressure. An important feature of mechanical filtration, which is sometimes called the American or rapid system, in contradistinction to the English system or slow sand filtration elsewhere described, is the use of a coagulant. Sulphate of alumina is the material most commonly employed for this purpose. When the water to be treated does not contain sufficient alkali to combine with the acid of the coagulant, lime or soda ash is often added to supply the deficiency. In the past alum has been sometimes used in the place of sulphate of alumina, but this substance is not employed in the best modern plants. Salts of iron, particularly copperas (ferrous sulphate) in late years have been successfully used in place of aluminum salts. When these chemicals are added to the water a flocculent precipitate (aluminum hydrate or ferric hydrate respectively) is formed in which bacteria and other suspended particles are entangled and by which they are speedily entrained to the bottom of the settling tank. The water in which such precipitation has occurred can then be passed relatively rapidly through rather thin layers of sand or fine gravel (Fig. 3).

Bacterial examinations of the effluents from carefully constructed and properly managed mechanical filters show that the percentage of removal of bacteria is nearly, and in some cases quite as great as with slow sand filtration. Elaborate experiments at Louisville, Cincinnati, Pittsburg and New Orleans have shown that highly turbid waters, especially waters containing a large amount of clay in finely divided particles, many of which are smaller than the average bacteria, can be better clarified by mechanical filtration than by slow sand filtration. On the other hand, the bacterial efficiency of slow sand filters is on the whole somewhat greater than that of the mechanical filters. Mechanical filters on their side yield in proportion to their size and initial expense a much larger quantity of water than the slow sand filter. It is estimated roughly that the rate of filtration in the mechanical filter is increased forty times. One of the best of the modern rapid filtration plants is that located at Little Falls, N. J., for treating the water of the Passaic river.[25] The engineer entrusted with the work recommended that a filter of the mechanical type be installed at this place, partly on account of the desirability of removing the high amount of color in the river water, partly on grounds of economy. The lower initial cost and the superior efficiency in removing color and turbidity are the respects in which the advantages of mechanical filtration are most apparent. Statistics regarding the reduction of typhoid fever mortality in cities supplied with water treated with mechanical filtration have not yet been obtained of sufficient cogency to permit of any direct comparison between the results obtained by this method and those secured by slow sand filtration. The experience of the city of Butler, Pa., where the temporary discontinuance of a mechanical filter brought on a disastrous epidemic of typhoid fever, indicates that a mechanical filter may, when properly operated, afford a considerable degree of protection to the users of a polluted water. It is maintained by some authorities that a relatively clear water should be treated by slow sand filtration, while a coagulant should be used in dealing with extremely muddy waters, which are not very highly polluted.

In recent years important improvements have been made in types of construction of mechanical filters, and in particular in the apparatus for feeding the coagulant. Automatic control of many details by the use of ingenious mechanical contrivance has made the possibility of failure through the ignorance or inattention of attendants more remote than formerly.

The methods of coagulation and slow filtration are not mutually exclusive. The preparation and application of the coagulating solutions require, however, knowledge of the changing character of the water under treatment, and expert supervision is found to be as necessary as in slow sand filtration. The view has been advocated that in cases where the water is not very turbid except at certain seasons of the year, slow sand filtration should be practiced at times when the water is reasonably clear, coagulant being added only during the short period for which it is found necessary to produce successful clarification. Experts have recommended that the water supply of the city of Washington, D. C., should be treated by this combination of methods. As has been pointed out, the initial cost of construction of a mechanical filtration plant is somewhat less than that of a slow sand filter of the same capacity, but the cost of operation is greater. It can never be safely forgotten that both systems require constant expert supervision to maintain them in a state of hygienic efficiency. The experience of the next decade is likely to furnish data that will clear up some of the disputed points concerning mechanical filtration, notably as regards its influence in lowering the typhoid fever death-rate.

Other Means.—While slow sand filtration, or mechanical filtration or the use of small domestic filters are the methods of water purification most generally employed at the present time, there has been no lack of suggestions and experiments in other directions. The method of purifying water by heat is the only practicable one under certain conditions, and it need hardly be said that this method affords a unique guarantee of bacteriologic purity. The typhoid bacillus is killed by exposure for ten minutes to a temperature of 57° C. and is destroyed surely by a shorter exposure to higher temperatures. The other chief water-borne micro-organism, the cholera spirillum, is yet more sensitive to the action of heat. In any given case, therefore, when there is strong reason to suspect that a water is polluted, undoubtedly the safest procedure for an individual consumer is the purification of the water by boiling. The assurance of safety thereby obtained is unquestionably greater than by any other method. Objections to the flat taste or cloudy appearance of freshly boiled water can be readily removed in household practice by passing the water after boiling through a filter of coarse material, e. g., sandstone, which aerates the water and restores it to its pristine brilliancy.

Some popular misunderstanding seems to have arisen concerning the length of time water should be boiled in order to render it safe for drinking purposes. It must not be forgotten that what is aimed at is not bacterial sterility, but practical safety. The spores of certain saprophytic micro-organisms, such as the hay bacillus, will resist boiling for hours and the attempt to render water absolutely germ-free by continuous boiling is not likely to succeed in all cases. Direct experiment has shown, however, that as regards the bacteria of the ordinary water-borne diseases, it is sufficient to

25. A good description of this plant is given in the Transactions of the American Society of Civil Engineers, 1903, 50, p. 394.

insure safety if the water be boiled for ten minutes. Boiling for one hour or even for one-half hour is not necessary.

Objection to the use of boiled water is sometimes made on the ground that unless the water be carefully protected after boiling a multiplication of bacteria will take place which will raise the germ content to a point higher than that originally obtained. Such an objection fails to take into account the really significant feature. A multiplication of the saprophytic bacteria present in a pure spring water may likewise occur, even at a low temperature, but there is no reason for supposing that the sanitary quality of such a water is in any degree impaired. In other words, it is not the number, but the kind of bacteria present that possesses sanitary significance. It is a relatively simple matter to guard against accidental introduction of typhoid bacilli or of cholera spirilla into a boiled water, especially since these germs rarely if ever occur floating in the atmosphere and then only in the immediate neighborhood of the sick.

The sterilization of water by the use of chemicals has also been frequently attempted, sometimes with a high measure of success. In recent years the purification of water on a large scale through impregnation with air containing a high percentage of ozone has been undertaken in certain German water works. The ozone is generated by electricity by special appliances and the amount introduced into the water is so adjusted on the basis of carefully controlled experiments as to afford a maximum of operative efficiency with a minimum output of ozone. In several places small ozone plants were installed in connection with water works, and the waters treated by this process are said to be very low in bacteria, the number in the raw water being sometimes reduced from 20,000-30,000 per c.c. to only 8-10. The matter of expense, however, is not reassuring for the future of the ozone treatment on a large scale and the wholesale treatment of public water supplies with ozone does not seem destined to wide extension. A plant established in Wiesbaden has been recently abandoned.

A number of other methods have been proposed for the sterilization of water by chemical means. Compounds that liberate chlorin (Moritz, Traube), bromin (Schumburg) or iodin (Vaillard) have been especially used for this purpose. The risk of imparting a disagreeable taste to the water seems, however, to be considerable and in practice these methods have usually failed to meet the expectations of their advocates.[26] Recently the use of copper sulphate has been championed as a means of freeing water supplies both from algal pests (Chapter III.) and from disease germs.[27] "At ordinary temperatures 1 part of copper sulphate to 100,000 parts of water destroys typhoid and cholera germs in from three to four hours. The ease with which the sulphate can then be eliminated from the water seems to offer a practical method of sterilizing large bodies of water, when this becomes necessary." Further experimentation seems desirable.

An effective mode of chemical treatment would possess obvious advantages. In tropical countries and among exploring expeditions or soldiers on the march the surer method of sterilizing water by boiling encounters overwhelming obstacles. The substances that have been proposed for use under such conditions have not, however, given very satisfactory results. Potassium permanganate is reasonably efficacious in destroying pathogenic bacteria in water under laboratory conditions, but in the field its value is problematical, especially in those cases in which the water contains much organic matter. Parkes and Rideal[28] have recommended sodium bisulphate in the proportion of fifteen grains to the pint, action of the chemical to continue for 15 minutes before use of the water. Other observers have failed to confirm altogether their statements, and it is obvious that natural conditions may vary so greatly as to make generalizations based on laboratory experiment of little value. The use of citric acid (lemon-juice) as a germicide may be looked on with even greater scepticism. On the whole, the employment of chemical substances for water purification can hardly be said to be as yet on a very sure foundation.

26. See for example Schilder on the bromin method, Zeits. f. Hyg., 1901, 37, p. 307.

28. Trans. Epidem. Soc., London, 1900-01, 20, p. 33. letin No. 64.

27. Trans. Epidem. Soc., London, 1900-01, 20, p. 33.

Clinical Notes

IMPROVED METHODS FOR THE GUAIAC TEST FOR BLOOD AND THE OXIDATION TEST FOR INDICAN.

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The usual method for the guaiac test calls for an old sample of turpentine which has dissolved active oxygen from the air, or in lieu of it a fresh bottle of hydrogen dioxid. The turpentine of ripe age is not always at hand and, like the hydrogen dioxid that has been used through the summer, is of uncertain oxidizing power. An oxidizer of constant strength in any climate is much to be desired. In the usual process liquid reagents are employed in the test tube, which means a larger volume of the blood material than can always be obtained and a response not sensitive enough for small quantities. Sometimes a few threads of blood-stained linen are all that can be had.

THE MODIFIED GUAIAC TEST.

To meet this difficulty the following modification is proposed: The oxidizing agent is sodium perborate as made by Schering from sodium dioxid and boric acid. It is better than sodium dioxid alone because it does not absorb water and carbon dioxid from the air and is, therefore, more stable. The sample I have used has been kept loosely boxed for a year and a half. Immersed in water this yields hydrogen peroxid and oxygen as freely as when first obtained. Because of its compactness the tablet form is preferred.

METHOD.

A solution is made of freshly broken pieces of guaiac resin by boiling them with alcohol in a test tube for a few minutes until the tincture is yellow. The suspected material, which may be a drop or two of blood or of bloody urine or of water in which a blood-stained fabric has been steeped, is cautiously mixed with a drop or two of guaiac solution to make a milky mixture. This is brought in contact with a fragment of sodium perborate on a white plate.

If the proportion of blood is large the white perborate turns blue in a few minutes and remains blue until the drying of the guaiac leaves a yellow residue which changes the blue to green. This blue-green color persists on and about the perborate and is well shown on the white background for at least a week. If the proportion of blood is small the white perborate takes on a pale blue hue which turns green as the guaiac dries. The next day a distinct green stain is left on the white plate. The test is simple and delicate, though it must necessarily be open to the fallacies that belong to the guaiac test in any form. A distinct reaction was obtained from a small five-year-old blood stain on linen.

THE INDICAN TEST.

Jaffe's test for urinary indican commonly employs a solution of chlorinated lime or of chlorinated soda or of hydrogen dioxid. Great care is enjoined lest excess of the reagent should carry oxidation beyond the desired point of indigo-blue to that of isatin, a yellow substance. All of these reagents are liable to be of indefinite strength, and, therefore, each must be added at first in amounts suitable for a strong specimen, though later it may prove to be lacking. Potassium chlorate has

been advocated because of its definite composition, but the reaction with it is often disappointing and tardy.

Because of its permanent strength and prompt action, sodium perborate stands us in good stead. From healthy urines, containing about 1 to 5 mgs. (.001 to .005) of indoxyl salts per liter, I obtained a distinct indigo-blue reaction, uniformly, by the following procedure:

METHOD.

To a test-tube filled one-fourth with urine an equal quantity of concentrated hydrochloric acid is added to liberate the indoxyl-sulphuric acid or urinary indican and then as oxidizer a piece of sodium perborate as large as a full-sized pea. The mixture, which immediately effervesces briskly, is gently agitated to dissolve the perborate. The urine promptly deepens in color and if the amount of indican be large, turns faintly blue. To concentrate the color, one cubic centimeter (16 minims) of chloroform is added, the tube closed with the thumb and the contents *gently shaken for at least two minutes.* The chloroform separates at the bottom as a layer varying in depth of blueness with the proportion of indican. Some pathologic urines yield a layer almost black in color. If the shaking is too vigorous the chloroform is emulsified and remains milky, though with a decided blue tinge.

If the patient is taking potassium iodid, Jaffe's test is always liable to a fallacy from the violet blue color of free iodin in chloroformic solution. If this complication is suspected, the acid fluid is poured off and to the blue chloroform potassium hydroxid is added. Color due to iodin disappears while indigo-blue remains.

RECOVERY FROM BROKEN NECK.*

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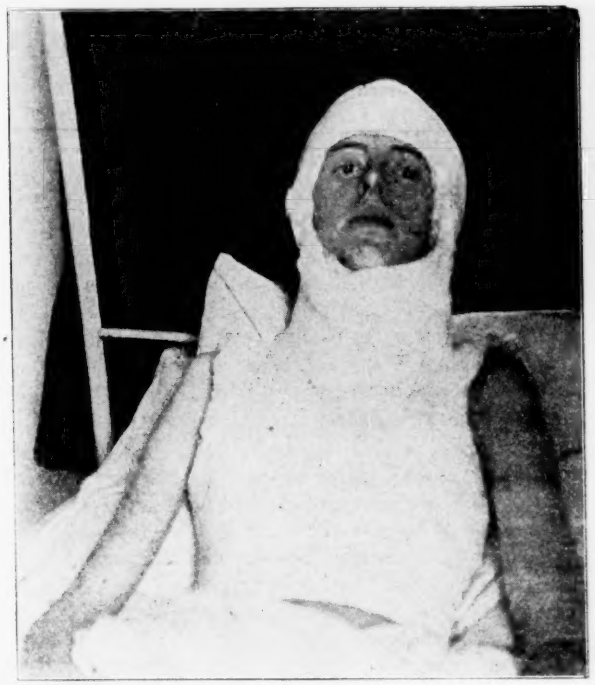
This case is of interest, not because a broken neck is especially rare, nor is recovery with partial restoration of function very unusual, but complete recovery following operative interference from fracture through the cervical vertebræ is almost unprecedented. I use the term broken neck advisedly—the conclusions of practically all observers have been that a dislocation of the cervical vertebræ without some fracture is impossible. If we are familiar with the bony contour of the vertebræ, with their articular processes placed nearly vertical, we readily understand how a dislocation without a fracture of greater or less magnitude is impossible.

Medical literature contains report of a number of cases of fracture of the cervical vertebræ showing partial recovery with persistent deformity of the neck, greater or less pressure on spinal cord, possible paralysis, bed sores, etc., but I have been able to find but three cases where there was complete and absolute recovery following surgical interference in these cases. The case is as follows:

History.—Roger C., aged 16, weight 110 pounds. On March 6, 1907, he was looking over the gate of a freight elevator, had his chin over the same, the elevator descended, striking the back of his head, and at the same time the gate ascended, catching him at about the region of the larynx, the two lines of force exerting a peculiar shearing pressure on the boy's neck. He was hurried to the City Hospital, where I saw him twenty minutes later, at which time he presented the clinical picture of pressure on the cord.

Examination.—The boy was unconscious. He was rigid, with violent incoordinate movements, the limbs markedly flexed, all the flexors predominating, complete anesthesia, greatly exaggerated knee jerk, ankle clonus, paralysis of sphincters of rectum and bladder. Breathing was diaphragmatic, shallow and slow. He was cyanotic, the pulse being 120 and thready. His head was slightly crowded back out of position; there was a dimple in the back of the neck over the spine of the third cervicle vertebra. The palpating finger in the pharynx could distinctly make out the prominence of the body of the second vertebra dislocated forward. The boy was *in extremis*, and I advised his parents that he would probably die on the operating table, but he was doomed in any event, and should be given the chance of surgical interference. Dr. J. E. Moore, whom I asked to see him, concurred in this opinion, and the lad's parents consented to the operation.

Operation.—He was placed on his back on the operating table, without anesthesia, his head and shoulders extending over the edge of the table. While the hospital internes held him by his shoulders and body, with one hand under his occiput and the other under his chin (my feet on the edges of the table for a leverage) I made powerful traction on his



head with no other result than twice to dislocate his lower jaw, which had to be reduced. Then with a folded towel over the teeth of his upper jaw to protect my hand, I made traction from here and the occiput. Dr. Moore meantime, with his fingers in the pharynx, crowded back on the vertebræ; this also was unsuccessful, and finally I had an interne grasp my wrists and pull with me; we used all our strength, first extended and then flexed the head on the neck sharply, when the vertebræ slipped into place. The relief to the patient was instantaneous, showing pressure on the cord was relieved; his pulse and respiration quieted down, the incoordinate movements ceased, and sensation returned. He was put to bed with the head of the bed raised, a ten-pound extension on his head pulling from the vertex through the medium of a Barton's bandage, pulleys and weights.

Further Treatment.—Bromids were crowded with the expectation of meningitis developing. He was catheterized for the first twenty-four hours, then voided urine involuntarily, while the bowels responded to enemas. His temperature for the first ten days ranged from 100 F. to 102 F., while his pulse continued high, averaging 120. He had no symptoms of effusion or pressure other than that he was unconscious for twelve days. He was fed by rectum for four days. At the end

* Reported before the Minnesota Academy of Medicine, May 3, 1907.

of the seventh day, still making extension on his head, his body was slipped over the edge of the bed and held by orderlies and internes while I applied an extremely heavy cast from his hips to the top of his head, enveloping him entirely save his face from his mouth to his brows. In the photograph (Figure 1), the cast has been cut away from his chin to dress a small area of pressure necrosis due to the extension. This cast absolutely immobilized his head, neck and shoulders. After the plaster had set the extension was removed. He was left in this cast four weeks. After his return to consciousness on the twelfth day all medication was stopped, and save for a burn on his left arm and leg, resulting from leaking hot water bags applied by a green orderly when first received in the patrol room, he was very comfortable. His temperature had dropped to normal, although his pulse still persisted between 100 and 110. At the end of the fifth week after his injury his cast was removed to find that the boy had made a perfect recovery. He was allowed to get up and go about with a simple collar of plaster, more to remind him to be careful than anything else. At the end of the sixth week he was discharged, cured, with perfect function.

A skiagraph was kindly made for me by Dr. J. Clark Stewart seven weeks after the injury. In comparing it with skiagraphs of a normal neck it could be seen that the second intervertebral space where the dislocation occurred was a little more pronounced, but the vertebræ were in perfect position.

THEATMENT OF HAY FEVER.

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As all rhinologists are aware, it is often found that the only areas of contact in the nostrils of the hay-fever patient are formed by congested sections of the anterior third of the inferior turbinate and the resisting nasal septum. Such areas are frequently limited to the very tips of the inferior turbinates, however, as is well known, contact areas may be found in various other sections of the nostrils.

A contraction should be brought about through the application to these areas of a weak solution of cocain and adrenalin by means of pencil or pledget. If these areas of contact are not extensive, the contraction may be made permanent by the cauterization of their irritable surfaces with chromic or trichlor-acetic acid or both, providing the patient speedily becomes a normal breather and remains such. Atropin sulphate, administered in doses of gr. 1/200 immediately preceding cauterization, will aid contraction and prevent copious secretion. Applications of this drug may be repeated occasionally. It may be found that doses of gr. 1/400 will prove as efficient as the larger dose.

If the obstructive areas are extensive and it is difficult or quite impossible for the patient to get air through the nostril I remove sections of the areas involved wherever they exist, even at the height of the attack, with scissors and snare or punch-forceps, whether congestion or hypertrophy exists; and when it is necessary to prevent contact areas I do not hesitate to remove even extensive areas entire. I have been doing this for the past five years with most excellent results.

If the affection is bilateral it is usually well to leave one nostril for a day or two.

If septal obstructions are present their removal and subsequent nasal breathing may be all that is necessary to bring about a normal condition. As it is usual after nasal operations, the patient should be instructed to sit erect with basin directly beneath the chin until all bleeding has ceased. The nostril will require little or no packing if the patient is mindful of the instruction to breath through the nose, to keep the nostril operated on as free from clot, etc., as possible, blowing the nose when necessary (never both sides together) and following the same instruction regarding bleeding if there is a recurrence after leaving the operating room, substituting gauze for basin if such a recurrence happens before reaching home.

If the operator decides wedging is necessary he should use just enough sterile wedging to prevent adhesion and only between those sections absolutely requiring it, for it is essential that the patient breathe through that nostril, if not freely, at least as much as is possible. Occasionally it may be necessary to keep a wedge between certain surfaces for a few days, but it is remarkable how speedily healing takes place if the patient is persistent in nasal breathing. A slight coating of chromic and trichlor-acetic acids over small areas may sometimes prove useful following operations to favor contraction and to prevent secondary hemorrhage. It may also prevent the necessity of wedging, as it promotes a crusting which often makes adhesion impossible.

It is well to remember that atropin sulphate, in the above mentioned doses, may be helpful during the healing process in these cases. Also in subsequent years if there is the slightest nasal disturbance due to small recurring contact areas, when the patient has not been entirely faithful to his instruction in breathing, atropin sulphate and absolute nasal breathing will overcome what otherwise might prove a severe recurrence of hay fever.

As I stated in my first letter to THE JOURNAL,[1] I do not consider a nostril capable of establishing a contact area, especially below its median line, normal. If, for the purpose of diagnosis, I can establish such an area in the nostrils of a hay-fever patient at any period other than his hay-fever attack, in other words, if I have not seen the patient during his hay-fever period or during an attack of "cold in his head," I irritate the nostrils, and if I am able to bring about a contact area I treat it appropriately, being governed in this by the extent of the area involved.

The nostrils having been relieved of all obstruction, it must be insisted that the patient wear the plaster mouth guard, during sleep at least, as soon as possible, and one may be certain that when his patient informs him that he has been able to wear the plaster the entire night without discomfort he is going to have little further trouble, and this he should be able to do within the first four days of treatment unless the obstructions are more than ordinarily extensive.

When the contact areas are very small it is not at all unusual to find that the patient has worn the plaster without discomfort the entire night following the first treatment. The plaster mouth guard must be worn until the patient has overcome his faulty breathing.

A nasal spray or douche should not be ordered under any circumstances. Air breathed normally through unobstructed nostrils, and nasal secretion, providing the patient is following Nature's general requirements necessary to good health, will bring about a more speedy recovery than any production of the laboratory possibly could.

The patient must be impressed with the necessity of nasal breathing to resist asthmatic attacks during these periods, and he who has had such attacks must be assured that he may expect a recurrence yearly if he does not possess nostrils as nearly normal as possible and use them as Nature intends he should. After the physician

1. THE JOURNAL, Sept. 8, 1906, p. 793.

has given his patient such nostrils he must not instruct him to avoid anything or any place or thing which has previously excited the periodic sneezing attacks, but rather the patient must be advised to revisit such a place or have some golden-rod brought to him, or, as I often do, have it for him in the consulting room, and insist that he bring his nose in contact with it.

These tests carried on even during the healing process establish a confidence in the operator's efforts, for it will be found that what was previously an excitant is no longer one.

It should not be suggested that the hay-fever patient go to the mountains or take a sea trip, but rather that he remain at home and be cured, and ordinarily he may be assured that it will not be necessary for him to neglect business during the period of treatment.

A SIMPLE METHOD OF OBTAINING STOMACH CONTENTS.

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NEW ORLEANS.

At times it happens that some difficulty is experienced in obtaining stomach contents by the expression method from patients after a test breakfast or test meal, and the operator hesitates to use violent suction methods by

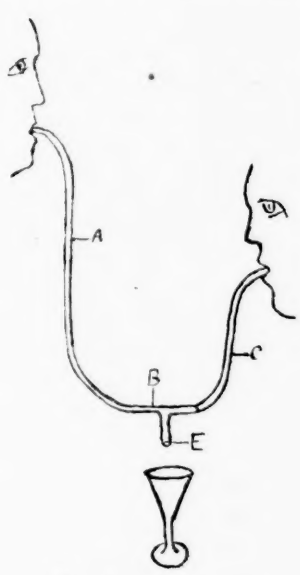

Figure 1.

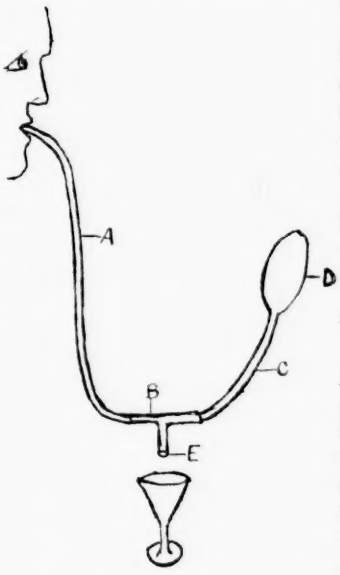

Figure 2.

means of pump or otherwise. In such a case the simple device which I have used successfully for some time will be found quick and economical:

A in Figure 1 represents the stomach tube in place in the patient's stomach; B, a glass T tube; and C, a piece of rubber tubing used for suction purposes. To the latter the lips of the operator (Fig. 1) are applied and gentle suction is made; or, a rubber bulb D (Fig. 2) is attached to the end of the tube. When suction is made by the operator's lips the free end of the T tube, E, is closed by means of the index finger and gentle suction is practiced. As soon as fluid makes its appearance in the glass T tube, the finger is withdrawn and the fluid is allowed to flow into a receptacle held in position to receive it. If the bulb is employed, it is first compressed, the free end of the glass T tube is closed by means of the index finger, the pressure is then released from the bulb and the fluid allowed to flow for collection. During the course of this procedure, care should be exercised to have the end of the stomach tube to which the T tube is attached on a lower plane than the lower border of the stomach. The patient may be placed in the sitting or recumbent posture during this manipulation.

124 Baronne Street.

A PORTABLE APPARATUS FOR STOMACH DOUCHE.

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ROME, GA.

A simple and at the same time efficient means for irrigating the stomach can be made by bisecting the tube of an ordinary fountain syringe and inserting a glass T tube to which an ordinary stomach tube may be attached.

The stomach tube may be first introduced and then the attachment is made. While the left hand steadies the stomach tube the fingers of the right hand alternately compress at A and B.

By having the stomach tube and a glass T the ordinary household fountain syringe may be made available in less than a minute in emergency cases.

The whole apparatus may be sterilized and wrapped in paper so as to be carried in the coat pocket.

Recovery After Carbolic Acid Poisoning.—The *Gaz. méd. Belge*, xix, 208, relates that d'Hotel was able to save two patients who had taken carbolic acid by prolonged rinsing out of the stomach, although an interval of one and a half and two hours had passed before he saw the patients. In the first case he poured tepid water containing ipecac through a funnel introduced into the nostril, with traction on the tongue, injection of ether and measures to induce artificial respiration. After a time vomiting occurred and the patient was made to drink large amounts of the water. Consciousness gradually returned and in two hours he had practically recovered. The cure was completed by administration of sodium sulphate. The other patient was a young woman who was apparently dead when first seen, with no response to pricks or revulsion, two hours after having swallowed three or four tablespoonfuls of the official phenic acid. He improvised a stomach tube out of a fountain syringe and washed out the stomach thoroughly, keeping up the lavage for a long time. Gradually the complete coma yielded to consciousness and in a short time the patient was entirely restored. The stomach was rinsed out until there was no odor of the carbolic acid in the returning fluid. He believes that the shock and the absolute immobility of the coma in these cases prevented absorption of the carbolic acid remaining in the stomach after the absorption of a certain proportion had induced the symptoms of serious intoxication. The discoloration and odor of the urine showed that only a small percentage of the poison ingested could have been absorbed. No complications of any kind followed.

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[*For other information see second page following reading matter.*]

SATURDAY, JUNE 8, 1907.

THE DIAGNOSIS OF SYPHILIS BY SERUM REACTIONS.

We have previously explained[1] at some length the principles involved in the reaction known as "deviation of complement," and we wish here to describe certain practical results that have been obtained by the application of this reaction. The principle of the reaction as first demonstrated by Bordet and Gengou is as follows: Bacteria contain a substance which combines with the specific immune substance of sera of animals immunized against them, and if bacteria are permitted thus to combine with the immune substance (amboceptor) of a serum devoid of complement, the resulting combination has the power to unite with the complement contained in any serum to which it may be added. Consequently, if we add bacterial substance to an unknown serum, which has been freed from complement by heating, and then find that the mixture of bacteria and serum has the power to unite with the complement of a normal serum, we have evidence that the unknown serum contains immune bodies (amboceptors) which are capable of combining with the bacteria used in the experiment. This reaction can be used, therefore, in case of a serum of known properties to establish the identity of an unknown organism, and, conversely, by using a known organism to establish that the serum of a given individual contains antibodies to that organism. The latter observation, in appropriate cases, may lead to the conclusion that the individual has suffered or is suffering from an infection with the specific organism used in making the test.

The application of this reaction to the diagnosis of syphilis was made possible by the observation of Wassermann and Bruck[2] that the infected tissues and body fluids of an individual contain sufficient amounts of bacterial substance to permit of their use in carrying out the reaction in cases in which the organism itself can not readily be isolated. At first this was found true for tuberculous infection, and soon after, in association with Neisser, it was found possible to demonstrate antibodies for syphilis in the cerebrospinal fluid of syphilities. In the case of investigations on syphilis the original obstacle was the fact that the organisms can not be isolated for use in the test, but following Wassermann's observations it was found that the tissues of fetuses with congenital syphilis contain enough of the substance of the *Treponema pallidum* to give the reaction.

The method of performing the test is, briefly, as follows: Fresh organs from a fetus infected with syphilis are ground up and an extract made with salt solution, which will contain, in addition to the soluble constituents of the tissues, the soluble constituents of the organisms contained in the infected tissues. To this is added a small quantity of the spinal fluid of the patient under examination, which has been heated to 56 C. to destroy any complement it may contain; and the complement is provided by adding fresh serum from a normal guinea-pig. The mixture is left standing for an hour in the incubator, and if the patient in question is syphilitic the following reaction will occur: The syphilitic antibodies contained in the spinal fluid will combine with the treponema substance contained in the extract from the fetal tissues, and the resulting compound will unite with the complement contained in the fresh serum which has been added. As a result there remains no free complement in the mixture, which fact is ascertained as follows: A small quantity of serum from an animal immunized against the red corpuscles of another animal is heated to 56 C. to destroy all the complement it contains, and then added to the mixture of syphilitic material and serum previously described. Now if the complement of this mixture has all been combined by syphilitic antibodies the heated hemolytic serum will not be activated, and consequently will have no power to hemolyze red corpuscles. The presence of syphilis in the individual from whom the spinal fluid was obtained is shown, therefore, by the inability of the mixture of which this fluid forms a part to hemolyze the specific red corpuscles. If he has not syphilis the complement is not bound by the extract of syphilitic tissue, and hence is free to activate the hemolytic serum.

It can readily be seen that this method of diagnosis can be performed only by men experienced in the finest details of serum research, and only in places with enormous hospital facilities permitting the obtaining of fresh syphilitic fetuses at frequent intervals. As the substances involved in the reaction lose their properties in a very short time the tests can be made only when fresh material is on hand, thus restricting greatly the wide use of the procedure, but possibly in time this difficulty may be overcome. In spite of all these handicaps the method has been applied in several of the large German hospitals, with the greatest success, and in this way it has been possible to obtain evidence of the previous occurrence of syphilis in many cases of tabes, paralysis, pachymeningitis and other parasyphilitic affections. The results so far obtained furnish support to the customary view of the relation of syphilis to many chronic nervous diseases, for Wassermann and Plaut demonstrated syphilitic antibodies in the spinal fluid of thirty-two out of forty-one paretics; and Schütze obtained positive results

1. THE JOURNAL, Dec. 1, 1906, p. 1832.
2. Bibliography and details of the methods of applying the test will be found in an article by Albert Schütze, in the Berl. klin. Wochschr., Feb. 4, 1907, p. 126.

in eight cases of tabes in which a history of syphilis was obtainable, but negative results in four cases without a history of syphilis. In active syphilis, however, the reaction sometimes fails,[3] and hence a negative result is not always conclusive. That such procedures can be carried out so successfully by different observers furnishes a striking illustration of the degree of refinement to which our "immunologists" have carried their technic.

DR. SAMUEL WARREN AND SURGICAL HISTORY.

The one-hundredth anniversary of the birth of Dr. Samuel Warren, whose contemporaries always affectionately called him Sam, and who, a little more than half a century ago, was the most popular writer of fiction in England, was celebrated very quietly in literary circles May 25. Dr. Warren had studied not only medicine but law, and turned aside from both professions to write the best-selling books of his time. He is best known for his "Ten Thousand a Year," the names of certain characters in which, as, for instance, Oily Gammon and Tittlebat Titmouse, will probably be long used as types of their kind. For physicians, however, his most interesting works are "Passages from the Diary of a Physician" and the "Diary of a Medical Student." These two books contain probably more material for the inside history of medicine and surgery and medical education in the early part of the nineteenth century than any even of the formal histories of these subjects.

We have progressed in our day beyond taking Dr. Warren's "Ten Thousand a Year" so seriously as did his contemporaries—or even as he himself took it, for he was said to have shed tears over the woes of some of his aristocratic characters—but his contributions to the intimacies of the physician's life and of medical students' experiences deserve to be on the shelves of every physician interested in medical history. Nowhere, for instance, will one obtain better descriptions of the conditions of surgery before the introduction of anesthesia and antisepsis than in the "Diary of a Medical Student." This contains a series of sketches of the life histories of some of the patients who applied for treatment at Guy's Hospital, London, during Dr. Warren's student days there. Undoubtedly there are fictitious elements in the pictures, but certain portions of them at least were drawn from life and have the value of genuine historical writing. There is a description in one of these sketches of the huge operating table, covered with leather (shades of sepsis!), on which patients were firmly fastened before the operation was begun. The description of the screams of the patient and of the circumstances attending an operation, when friends were occasionally allowed to be present, shows what heart-rending scenes there must have been in hospitals in the preanesthetic days. The number of the cases described in which death in fever took place from the third to the seventh day after the operations recall vividly the lack of knowledge at the time with regard to the prevention of infection.

After reading of these scenes and learning to appreciate the high death rate that must have obtained in the hospitals the old tradition of popular antipathy to these institutions is not surprising. It was founded not so much on ill-treatment or lack of proper care, as is sometimes said to have been the case, but rather on the fact that anesthetics had not been introduced, hence the infliction of excruciating pain by the surgeon was inevitable and heart-rending scenes were constantly occurring, while the lack of aseptic precautions made post-operative mortality high. Many operations must have seemed to the patient as if done only for the instruction afforded, since so many of those operated on in any grave manner perished almost as inevitably as if they had been allowed to die without operative intervention.

THE TRANSMISSION OF MEDITERRANEAN FEVER.

So far as we know, it has never been definitely proved that the so-called Mediterranean or Malta fever exists in the United States. It has been suggested that some of the obscure fevers of the south might be of this nature, but it has not been proved that this is the case. That the disease exists in the West Indies and in the Philippines has been known for some time. Patients suffering from Mediterranean fever have been imported into this country, but no spread of the affection has been noted, and apparently with ordinary care there is little to fear from the human patient. The recent report of a British Government Commission[1] seems to show that others than human beings may aid in conveying the disease, and that a possible source of danger to this country exists.

The last report of this commission summarizes the work of several years carried on by a variety of investigators, not only at Malta, but also at other distant points where the disease occurs. The investigations show that the *Micrococcus melitensis*, the cause of the disease, leaves the body by the urine and also by the milk. The breath, saliva and sweat do not contain the organism, and it is doubtful if it is present in the feces. Especial stress is laid on the excretion by the milk, for it has been found by the commission that not only in the human being, but also in the goat the organism is excreted in this manner, and often in enormous numbers. In Malta, where the disease is most prevalent, goat's milk is commonly used in place of cow's milk, and bacteriologic examinations have shown that a large percentage of the animals are infected. The commission has decided, after prolonged investigation, that contaminated goat's milk is the common method by which the disease is conveyed. It has been found that not only in Malta,

3. See Wassermann et al, Zeitschr. f. Hyg., 1906, lv, 451, and Morgenroth and Stertz, Virchow's Arch., 1907, clxxxviii, p. 166.

1. Report of the commission appointed by the Admiralty, the War Office, and the Civil Government of Malta for the Investigation of the Mediterranean Fever. Published by the Royal Society, April, 1907.

but also in some parts of India and in the Orange River Colony, the disease is associated with the use of goat's milk, and it is further shown that in Gibraltar the gradual disappearance of the disease has been associated with the discontinuance of the importation of Malta goats to that place and the gradual exclusion of infected animals from the rock. Other evidence of the transmission by goats lies in the fact that the fever is not a place disease; it at times occurs as localized outbreaks, officers and women, who consume much more milk than the enlisted men, are much more frequently attacked, and finally there has been a marked diminution in the disease in the last year under measures directed against contaminated milk. The danger to this country lies in the fact that goats are imported here from the Mediterranean countries. The commission reports one very instructive outbreak of the disease on shipboard due to drinking the milk of some goats on their way to the United States. These animals actually arrived and have since, we believe, been detained at one of the government quarantine stations, where it has been shown by bacteriologic examinations that many of them are infected with *Micrococcus melitensis*. Had not the men on the ship conveying the goats used their milk, the infected condition of the animals would doubtless have remained undiscovered and they would now be domiciled somewhere in this country. Infection from goat's milk here would be unlikely, as Americans do not use the milk as a beverage, but this is not the only means of transmission. The commission shows that fly transmission may occur, and that possibly infected women may convey the disease through sexual contact. In any event, the possible danger from the introduction of infected goats should be borne in mind, prevention in such matters being a much simpler matter than cure.

DEATHS IN POLICE STATIONS.

New York City has recently had another of those sad experiences, the death in the cell of a police station of a patient who should have been in the ward of a hospital. These incidents are so common that they scarcely attract attention, and a recent occurrence would probably have been the subject of no more interest than usual had not the victim been a young and well-thought-of physician. He was overcome so far as to be unable properly to account for himself and he was taken to the station-house. There was no hint, apparently, that possibly he might be ill, instead of under the influence of liquor, as was at once concluded, so he was placed in a cell, where he was found dead in the morning. An investigation of the case was made by the coroner and his physicians, and, after a searching autopsy, no doubt was left but that the patient had been suffering from the coma of kidney disease. The victim's habits with regard to liquor and the state of his internal organs made it certain that he had not indulged in alcohol to excess and that he was not under its influence when brought to the police station. These facts have been substantiated.

This is a typical example of what may happen to any sufferer from kidney disease or diabetes or from any other form of chronic ailment which may produce a lethargic or comatose condition. If he happens to be stricken on the street, especially if the coma is not complete, he may become the victim of the senseless system which concludes that every person who is unable to orient himself, or who is not in perfect possession of his faculties, must of necessity be intoxicated. Unfortunately, many such sufferers when they begin to feel the symptoms of coma are tempted to try the effect of a glass of wine or whisky in the hope that it will dispel the lethargy that is oppressing them. Liquor taken under such circumstances may be vomited; it will almost surely make itself noticeable on the breath, and it is likely to be even more potent in its effect on such persons than on ordinary individuals. The possibilities of error in these cases, therefore, are greatly multiplied. Even experienced physicians may be deceived, and in large cities young physicians on the ambulance service not infrequently make rash and unfortunate judgments in such cases.

The only safeguard in these cases is the unfailing exercise of the greatest possible care lest a mistake be made, and the constant memory of the number of sad errors that have been committed. The slightest suspicion of the presence of kidney disease or diabetes in an individual must be sufficient for the substitution of the hospital for the prison, even though there may be the odor of liquor on the breath. The physicians may not be able to do much to relieve the condition in such cases, but at least death will not take place under the awful conditions of a prison cell. Better that hospitals should have to care for a few additional "plain drunks" every year than that a single genuinely ailing person should end his existence in a cell. Each succeeding generation of physicians has to learn anew this lesson, and while the difficulty can well be understood, it would seem that a little more insistence on the part of those who teach policemen the principles of first aid to the injured might bring about an amelioration of present conditions and a lessening at least of the number of cases of deaths under such circumstances in city station-houses.

SUMMARIES IN MEDICAL ARTICLES.

Every once in a while some one protests against the nuisance of medical articles with indefinite titles—titles that give no clew to the article's contents. Neisser has just emerged from his seclusion in studying anthropoid syphilis in the Dutch East Indies to inveigh against this practice; and any one who has ever had occasion to search the literature of any subject knows what a wretched source of useless work is the medical article with an indefinite title. But the purpose here is to call attention to another matter of inconvenience in medical articles, and that is the frequent lack of summaries of

contents. To keep in touch with current literature is an enormous task. It is a physical impossibility for any one with an engrossing occupation to read completely even a few of the medical journals. It may be said, indeed, that it is a useless expenditure of time to undertake to read thoroughly even one's favorite journal. The average careful man, therefore, undertakes to get at the gist of the literature which interests him and he reads carefully only that in which he is particularly interested at the moment or which seems to be of particular value; the rest he either neglects or lays aside for possible future reference. In sketching the literature in this way nothing is so valuable as good summaries of contents. Sometimes this is desirable in the form of a summary of facts to be brought out in the article, given at the beginning, but most frequently it is best placed as a summary of conclusions at the end of the article. If the article is worth writing, its author has a definite point in view or a definite group of facts which he wishes to bring out. That is what the readers want on the first glance at the article, and that should be furnished in the summary. If the reader can find a summary he knows at once the article's substance; it gives him an immediate orientation of the subject presented, and he knows, without wading through pages of matter, if he wants to consider it. From the author's standpoint also it is advantageous. The summary arrests the attention of the reader; it will stimulate an interest, if the subject is one in which the reader is at all interested, and it thus increases the possibilities of the article being read. Another thing that it indicates, which is not unsatisfactory, is that the writer has clearly in mind what he has undertaken to state.

MISQUOTATIONS AND MISUNDERSTANDINGS.

In these days of reporters and public appetite for sensational items it behooves physicians to be careful as to their public utterances. Medicine and theology are the two things in regard to which any bizarre statement is most readily taken up and exploited for all it is worth, and any careless expression that is capable of exaggeration or misinterpretation is dangerous. Even with the necessary qualifying clauses it is not safe, and the physician who indulges in epigrammatic utterances is especially in peril. One case of that kind has introduced into our language a term derived from the surname of one of the most distinguished physicians of the day, and the notoriety is most painful to him. Another prominent physician was recently misquoted as advocating euthanasia for consumptives, and his explanations and qualifying remarks will doubtless be overlooked by many who originally were powerfully impressed by the alleged quotation. A short time ago the utterance is said to have been made that 75 per cent. of the medical students graduated annually are incompetents, and the lay papers have taken the matter up *con amore* with any amount of comments disparaging to the medical profession generally, ignoring the fact that the same statement, in a sense of the word, might be just as correctly applied to beginners in every branch of human occupation. A half truth, or a whole one that requires qualification, is a dangerous thing to let loose on a public hungry for sensations, and it is no profit to an honest medical man to be put before the public as a heretic or sensationalist.

APPOINTMENT OF ASSISTANT SURGEONS IN THE ARMY.

At the examinations recently held for the appointment of assistant surgeons in the Army, thirty-three candidates were invited to appear; of these only eleven completed the examination, the remainder having failed to present themselves, having been physically disqualified or withdrawing for various reasons. Of the eleven who took the entire examination seven were found qualified, an unusually large proportion of successful candidates in comparison with past experience. There are now thirty-one vacancies in the junior grade of the medical department, taking into consideration the resignations which are now pending, and the prospects of filling them are poorer than for many years past. At the corresponding period last year there were nineteen vacancies and a much larger number of candidates for admission to the corps. The outlook for filling the vacancies in the medical department is, therefore, exceedingly discouraging. The recent increase of the coast artillery by over 5,000 men has, of course, still further decreased the relative proportion of medical officers, while the occupation of Cuba has greatly increased the demand for their services. It is believed that this dearth of candidates for the medical department is entirely due to the insufficient inducements offered young professional men in the medical corps of the Army, and the repeated failure of Congress to pass a measure for the relief of this condition, which has been so earnestly advocated by the Surgeon General, the War Department and the medical profession at large.

Medical News

ILLINOIS.

Smallpox.—Pontiac is reported to have 12 cases of smallpox. ——Two cases of smallpox were discovered in Joliet, May 22. ——A case of supposed smallpox is reported from Barry, Pike County. An investigation is being made by the State Board of Health.

Examinations to be Held.—Examinations will be held June 20 in Chicago, Springfield and East St. Louis for director of the Psychopathic Institute at the Illinois Eastern Hospital for the Insane, Kankakee, and for assistant physicians, clinical assistants and internes.

Personal.—Drs. William O. Langdon and R. Dillard Berry have resigned from the staff of the Springfield Hospital.—— Dr. Edward F. Gavin has been elected president and Dr. Fred L. Gourley secretary of the Waukegan board of health.—— In the case of P. M. Combes against Dr. W. Fred Harvey, Rushville, in which $10,000 damages were asked on account of alleged improper medical services, the jury returned a verdict for the defendant.

Chicago.

Senn Club.—Dr. John B. Deaver, Philadelphia, will deliver the address before the Senn Club at its meeting, Monday, June 17.

May Mortality.—During May, 3,028 deaths were reported from all causes, equivalent to an annual death rate of 16.91 per 1,000. Pneumonia led the death causes with 685, followed by consumption with 352; heart diseases, with 243; nephritis, with 215, and violence (including suicide), with 201.

Physicians' Club Election.—The Physicians' Club of Chicago, at its annual meeting, May 28, elected Dr. Daniel R. Brower,

president; Dr. Edwin B. Tuteur, vice-president; Dr. William T. Belfield, secretary, and Drs. Alfred C. Croftan, Charles L. Mix, Charles E. Paddock and Daniel A. K. Steele, directors.

Deaths of the Week.—During the week ended June 2 there were 643 deaths reported, or 198 more than for the corresponding period of 1906; the respective annual death rates per 1,000 being 15.91 and 11.83. The deaths from pneumonia numbered 116, followed by consumption with 70; heart diseases, 62; violence (including suicide), 61, and nephritis, 54.

Personal.—Dr. Gustav Ruediger of the Memorial Institute for Infectious Diseases has been appointed professor of pathology and bacteriology in the University of North Dakota and placed in charge of the state health laboratory.——Dr. Arnold C. Klebs sailed for Europe, May 30.——Dr. Alex. C. Wiener sails for Europe, July 9.——Dr. Orville W. McMichael sails for England, June 19.——Dr. Chalmers Prentice returned from Europe, May 25.

Chicago Suicides.—During the first four months of the year 46 Americans, 30 Germans, 9 Bohemians, 5 Poles, 5 Swedes, 4 Russians, 3 Italians, 3 Irish, 3 Norwegians, 3 Hungarians and 3 Danes committed suicide. The routes chosen were gas in 40 cases, gunshot wound in 22, carbolic acid in 17, hanging and drowning each in 9, cutting throat in 7, and miscellaneous methods, 10. During March 37 suicides were reported; during April, 33; during February, 36; during January, 15.

Heavy Mortality.—The climatic conditions of the first five months of the year in Chicago show the malevolent influence of the unseasonable weather. The 15,103 deaths reported make a daily average of more than 105, equivalent to an annual mortality of 17.32 per 1,000 of population. This is 16.7 per cent. higher than the rate of the corresponding period of last year and 13.4 per cent. higher than the average for the previous decade. Six of the important death causes contributed more than one-half of the total number of deaths. These are: Pneumonia, 3,000, or 762 more than last year; tuberculosis, 1,685; heart diseases, 1,179; nephritis, 1,012; cancer, 588, and nervous diseases, 570, a total of 464 more from the six latter causes than during the corresponding period of last year. These diseases are those over which sanitary science and preventive medicine have as yet obtained little or no control. The more or less controllable diseases, such as diphtheria, influenza, scarlet fever, measles and whooping-cough show a greater proportionate increase. From these five causes 1,155 deaths have occurred thus far this year, or 526 more than for the corresponding period of 1906.

INDIANA.

License Revoked.—At the April meeting of the State Board of Medical Examination and Registration the license of Julius C. Bloom, Elwood, who is said to have obtained it by fraud, is reported to have been revoked.

The Medical Student.—The May issue of the *Medical Student*, devoted to the interests of the School of Medicine of Purdue University, contains an excellent article by President W. E. Stone of the university on the "Evolution of Medical Education in Indiana."

April Disease and Death.—The most prevalent malady during the month was tonsillitis, followed in order by bronchitis, rheumatism, influenza, measles, pneumonia, typhoid fever, pleurisy, intermittent and remittent fever, scarlet fever, diarrhea, diphtheria, whooping-cough, smallpox, peritonitis, erysipelas, typho-malarial fever, dysentery, cholera morbus, cerebrospinal meningitis and cholera infantum. There were 91 cases of scarlet fever in 20 counties, with one death; 160 cases of diphtheria in 21 counties, with 25 deaths; 280 cases of typhoid fever in 37 counties, with 38 deaths. Tuberculosis caused 424 deaths, or 13 more than in the corresponding month of last year; pneumonia caused 284 deaths, or 102 less than in April, 1906. Measles was unusually prevalent and fatal. It was reported to exist in every county in the state and in some was epidemic. The total deaths from the disease numbered 42, while in the corresponding month of last year only 3 deaths were reported from this cause. The total deaths for the month were 2,813, equivalent to an annual rate of 12.7 per annum. Of the total deaths 12.3 per cent. were of children under one year of age and 32.3 per cent. of individuals over 65.

IOWA.

Medical College Graduation.—At the commencement exercises of Keokuk Medical College, May 14, a class of 30 was graduated. At the alumni reunion two members of the class of 1852, who had not met for 55 years, were present.

Personal.—Dr. Loran M. Martin, Sioux City, who recently returned after 18 months abroad, has been elected professor of gynecology in the Sioux City College of Medicine.——Dr. Nicholas C. Schlitz, Des Moines, was presented with a gold watch chain and fob by the senior class of Drake Medical College, May 24.

Communicable Diseases.—A number of cases of meningitis are reported in different parts of the state. In Ankeny three cases have developed, several in Council Bluffs and a number in Appanoose County.——Smallpox is reported to have broken out in numerous places in Southwestern Iowa, and strict quarantine is established at Riverton, Sidney and Hamburg. ——A number of cases of smallpox are said to exist near Paulina.——There is said to be 15 cases of smallpox in Dexter, and on the advice of the State Board of Health all public gatherings have been interdicted.——At Adel a number of cases of smallpox are said to be present.——Smallpox is reported in epidemic form at Jesup, where there are from 20 to 30 cases.

KANSAS.

Personal.—Dr. Frank McKinney has been appointed a member of the board of health and city physician of Baxter Springs. ——Dr. Charles H. Linley has been reappointed health officer of Atchison.——Dr. David W. Collins, Arrington, has been appointed poor physician of Kapioma Township, Atchison County.

Communicable Diseases.—During April there were 458 cases of measles reported in Kansas City.——Scarlet fever is reported from near Kansas City, Coffeyville, Parsons and Wichita.——At Hutchinson 24 cases are reported and under quarantine.——Several cases of scarlet fever are reported from Wichita.

State Society Meeting.—At the forty-first annual meeting of the Kansas State Medical Society, held in Kansas City, Kan., May 8-10, the following officers were elected: President, Dr. J. E. Sawtell, Kansas City; vice-presidents, Dr. Thomas Kirkpatrick, Garnett; Dr. Millard F. Jarrett, Ft. Scott, and Dr. George M. Gray, Kansas City; secretary, Dr. Charles S. Huffman, Columbus; treasurer, Dr. Lewis H. Munn, Topeka; librarian, Dr. Samuel G. Stewart, Topeka; delegates to American Medical Association, Drs. Lyman L. Uhls, Osawatomie, and Herbert L. Alkire, Topeka; councilors, Drs. Ora P. Davis, Topeka; Hugh B. Caffey, Pittsburg, and W. Preston Sterret, Kansas City.

MARYLAND.

Baltimore.

Personal.—Drs. Samuel Amberg, W. L. Moss and Payton Rous sailed for Europe, May 29.——Dr. H. C. Irwin, St. Joseph's Hospital, has become resident physician of the Franklin Square Hospital.——Dr. Mary C. Willis has recovered from her recent serious illness.——Dr. Sidney H. Adler has been appointed resident physician of the Uniontown (Pa.) General Hospital.——Dr. Thomas B. Futcher sailed for England, June 1.

Women's Medical College.—At the twenty-fifth annual commencement exercises of the Women's Medical College, Baltimore, a class of six was graduated. The address was delivered by Rev. Timothy Stone. The following faculty appointments are announced: Professor of surgery, Dr. Alexius W. McGlannan; associate in surgery, Dr. Maurice Lazenby; professor of neurology, Dr. W. B. Cornell; lecturer in bacteriology, Dr. Henrietta M. Thomas, and lecturer on pharmacology, Dr. Roland T. Abercrombie. Of the 98 graduates of this institution since its commencement, 25 are reported to be married, and of those who are in active practice 85 per cent. are said to be engaged in hospital or institutional work.

Centennial of University.—The centennial celebration of the University of Maryland began in Anatomical Hall of the School of Medicine, May 30. Dr. Samuel C. Chew made an impressive address, and Dr. John C. Hemmeter read greetings from 100 universities in various parts of the world. In the evening a large number of class banquets were held. On the next day the graduating exercises were held, at which 237 were graduated, including 62 in medicine. The addresses were made by Prof. Francis L. Patton of Princeton University, and President G. Stanley Hall of Clark University. Honorary degrees of LL.D. were conferred on Drs. Wilham T. Councilman, Boston; Simon Flexner, Philadelphia; Prof. G. Stanley Hall, Worcester, Mass.; Major James Carroll, U. S. Army; Surgeon General Walter Wyman, P. H. and M.-H. Service; Samuel J. Meltzer, New York City; William T. Porter, Boston; William J. Mayo, Rochester, Minn.; William T. Howard and Samuel C. Chew, Baltimore; the degree of D.Sc. on Drs. Alexander C. Abbott, Philadelphia; Henry J. Berkley, Baltimore; Charles P. Noble, Philadelphia; J. Homer Wright, J. Whitridge Williams, Baltimore; J. Ford Thompson, Washington, D. C.; Isaac S. Stone, Washington, D. C.; Henry D. Fry, Washington, D. C.

and Nathaniel G. Keirle, Baltimore; the degree of S.T.D. on Bishop Luther B. Wilson of the Methodist Episcopal Church, and the degree of M.D. on Drs. Thomas C. Gilchrist, Eugene F. Cordell and B. Merrill Hopkinson of Baltimore. A feature of the ceremony was the singing of the Latin ode composed by Dr. Cordell and the Hygiea by Dr. Hemmeter. At the banquet in the evening 300 were present and Dr. G. Lane Taneyhill acted as toastmaster. The services concluded June 2 with a sermon by Rt.-Rev. Luther B. Wilson of the medical class of 1887.

MISSOURI.

Contagious Diseases.—Smallpox is reported to be on the increase in Sedalia, where more than 100 cases are said to exist.——Ten cases of smallpox are reported at the Children's Home, Joplin.——Several cases of scarlet fever are said to exist in Bonne Terre. The parochial school has been closed on account of the prevalence of the disease.

Society Meetings.—At the annual meeting of the Southwest Missouri Medical Society, held in Springfield April 26, the following officers were elected: President, Dr. Green B. Dorrell, Republic; vice-presidents, Drs. William P. Patterson, Springfield, and Charles A. Moore, Aurora; recording secretary, Dr. Herbert S. Hill, Springfield (re-elected), and treasurer, Dr. William Patterson, Springfield (re-elected).——The Southeast Missouri Medical Association, at its meeting in Frederickstown May 9, elected Dr. Frank S. Vernon, Farmington, president; Dr. Ira A. Marshall, Ironton, vice-president; Dr. Gervase L. Johnson, Kennett, recording secretary; Dr. Thomas C. Allen, Bernie, corresponding secretary, and Dr. W. R. Goodykoonts, Caledonia, treasurer.——The medical fraternity of Webb City and Carterville met May 14 and organized the Webb City Medical Society. The following officers were elected: President, Dr. Charles E. McBride; vice-presidents, Drs. Ogla S. Wilfley and Lincoln C. Chenoweth; secretary, Dr. Lawrence C. Cook, and treasurer, Dr. A. S. Growden.——The name of the Buchanan County Medical Society has been changed to the St. Joseph-Buchanan County Medical Society.

NEW YORK.

Medical Board Named.—The State Board of Regents has nominated the following State Board of Medical Examiners, as provided for by the law passed by the recent legislation: Drs. William W. Potter, Buffalo; William S. Ely, Rochester; Eugene Beach, Gloversville; Floyd M. Crandall, New York City, of the regular school; Drs. Frank W. Adriance, Elmira; Floyd S. Farnsworth, Plattsburg, and W. S. Searle, Brooklyn, of the homeopathic school; Dr. Lee H. Smith, Buffalo, of the eclectic school, and Ralph H. Winchester, Rochester, osteopath.

Personal.—The village board of health of Bath was organized May 23 with Dr. John O. Aldrich, president, and Dr. Henry J. Wynkoop, secretary.——Dr. Lawrence P. Conley, Clifton Springs, has recovered from his recent operation for appendicitis.——Dr. Frederick Hoyer, Tonawanda, celebrated his eighty-fifth birthday, May 9.——Dr. Donald L. Ross, formerly physician of the Craig Colony for Epileptics, Sonyea, has been appointed medical superintendent at the Glenwood Sanitarium for Epileptics, Dansville.——Dr. Louis A. Harris, Newburgh, has been obliged to retire temporarily from the practice of medicine, on account of ill health.——Dr. Charles E. Alliaume has been appointed health commissioner of Utica.——Dr. Irving P. Lyon has succeeded Dr. John H. Pryor as chairman of the tuberculosis committee of the Buffalo Charity Organization Society.——Drs. Arthur F. Jackle, James Riley, James C. Haley, Ray Edson and F. L. Anderson have been appointed internes at the Sisters' Hospital, Buffalo.

New York City.

Medical Library Association.—At the annual meeting of the Medical Library Association of Brooklyn, held May 14, an appeal was made to the public for support of the institution, which is said to be the fourth largest medical library in the United States and has at present 60,000 volumes.

Medical Book Robber.—A man who gave his name as George I. Paulding has been arrested on the charge of stealing medical books and 28 physicians of the city, from whom valuable books have been stolen, have been notified to appear to identify the prisoner and property.

Personal.—Drs. and Mesdames Thomas E. Satterthwaite, Charles T. Poore, Richard W. Muller, John S. Thacher and Dr. James Ramsey Hunt sailed for Europe.——Prof. Gustav Killian of the University of Freiburg, Germany, was given a dinner at the Hotel Astor, May 31, by the members of the American Laryngological, Rhinological and Otological Society.——Dr. Abraham Jacobi was the guest of honor at a dinner given by Guy L. Kiefer, health officer of Detroit, May 22.

Anti-Tuberculosis Work.—Nine dispensaries have entered into an agreement with the committee on the prevention of tuberculosis of the Charity Organization Society to divide the city into districts, for the purpose of treating tuberculosis patients. The dispensaries that have entered into this plan are the Department of Health, Bellevue Hospital Dispensary, Gouverneur Hospital Dispensary, Presbyterian Hospital Dispensary, Harlem Hospital Dispensary, Vanderbilt Clinic, New York Dispensary, New York Hospital Dispensary, and the Health Department of the Bronx.

NORTH DAKOTA.

Epidemic Diseases.—Gladstone is said to be suffering from an epidemic of diphtheria.——On account of the prevalence of measles at Arena, the public school in that place has been closed.

State Board Meeting.—The North Dakota State Board of Health held its first meeting May 1. Attorney-General T. F. McCue is president of the board; Dr. Charles E. Bennett, Aneta, vice-president, and Dr. James Grassick, Grand Forks, secretary.

Personal.—Dr. Joseph C. Suter and family, Crystal, have removed to Vancouver, B. C.——Drs. James W. Stribling and Eleanor J. Hill have resigned as assistant physicians at the Hospital for the Insane, Jamestown.——On April 24, 20 friends of Dr. John E. Engstad, Grand Forks, celebrated the twenty-second anniversary of his practice in the state with a banquet, at which he was the guest of honor.

OREGON.

Personal.—Frederick J. Ziegler has been elected city physician of Portland, vice Walter V. Spencer, resigned.——Dr. Woods Hutchinson, Portland, has moved to New York City.——Dr. Burton H. S. Leigh, Portland, has returned from Europe and expects to locate in Chicago.

Proposed Hospitals.—It is proposed to erect a new station and emergency hospital in Portland at a cost of not less than $75,000.——The physicians of Oregon City are planning to erect a hospital in that place to cost about $7,000.——Articles of incorporation were filed for St. Anthony's Hospital, Portland, with a capital stock of $55,000. The hospital will be under the charge of the sisters of the Order of St. Francis.——The Navy Department is preparing plans for a hospital at the Puget Sound navy yard, Bremerton, to accommodate 100 patients, and to cost $150,000.

Graduations.—On May 1 the fortieth annual graduating exercises of the Medical Department of Willamette University, Salem, were held, when a class of 16 was graduated. The charge to the class was given by Dr. Lewis F. Griffith, and the address of the evening by United States Senator Charles W. Fulton, Astoria.——The University of Oregon, Medical Department, Portland, held its commencement exercises, April 29, when a class of 20 was graduated. Ex-Senator John M. Gearin delivered the address of the evening; Dr. Kenneth A. J. MacKenzie delivered the charge of the graduates; President Campbell of the university conferred the degrees and Dr. Simeon E. Josephi, dean of the medical faculty, awarded the diplómas.

OHIO.

Society Meeting.—At the annual meeting of the Barberton Medical Society, May 10, Dr. Cullen H. Whipple was elected president; Dr. Norman F. Rodenbaugh, vice-president, and Dr. Arthur H. Stall, secretary and treasurer.

Personal.—Dr. Charles S. Hamilton, Columbus, dean of the Starling Medical College, has been elected chancellor of the combined schools and Dr. George M. Waters, dean.——Dr. Alfred C. Beetham, Bellaire, has been appointed local surgeon for the Pennsylvania System.——Dr. Andrew J. Timberman, Columbus, has been appointed a member of the board of education.——An attempt was made to murder Dr. Elias V. B. Kendig, Haynesville, May 19. While making a call in the country he was fired on from ambush, but fortunately, was uninjured.——Dr. Carl R. Knoble, Sandusky, has been made police and fire surgeon of the city.——Dr. John B. Kotheimer, Youngstown, has left for Europe.

Epidemic Diseases.—Diphtheria is reported to be epidemic in Kent, where 20 cases and 2 deaths have occurred. The Central school, Kent, has been closed on account of the disease.——In the ten days prior to May 19 seven deaths from cerebrospinal meningitis were reported near Akron.——Eleven families at Fostoria were quarantined May 12, because of smallpox.——New cases of smallpox are reported to have de-

veloped at Versailles, Yorkshire, Piqua and Sidney.——There are now 28 smallpox patients in the Isolation Hospital of Toledo.——Smallpox in mild form has broken out a second time at Chicago Junction, where there are said to be 30 cases at present.

PENNSYLVANIA.

Officers Elected.—At the annual meeting of the Susquehanna County Medical Society, held in Montrose, May 7, the following officers were elected: President, William B. Beaumont, West Auburn; vice-president, Harvey M. Fry, Rush; secretary, Edward R. Gardner, Montrose, and treasurer, John G. Wilson, Montrose.

Pennsylvania Relief Fund Report.—The report of the Pennsylvania Railroad Relief Fund for April shows that $113,144.41 was paid in death and sick benefits by the employés relief fund for the company's lines east of Pittsburg and Erie. Of this amount $44,585.36 was paid as death benefits to the families of members, and $68,559.05 was paid for the relief of members disabled and incapacitated for work. Since the organization of the relief department in 1886 there have been paid in death benefits $6,688,108.94; and on account of disablements $9,673,067.09, making a total of $16,361,176.03.

Personal.—Dr. Benjamin M. Bartilson, Braddock, was recently operated on for appendicitis at the Braddock General Hospital.——Dr. Henry H. Riegel, Catasauqua, celebrated on May 8 the fiftieth anniversary of his entry into the profession. ——Dr. Thomas J. Gilmore, Williamsport, is ill with typhoid fever.——Dr. Nathaniel Z. Dunkelberger, Kutztown, is reported to be seriously ill with peritonitis.——Dr. George W. Dipple, Pittsburg, sailed from New York, May 21, for Germany.—— Dr. R. F. Ridgeway, interne at the Harrisburg Hospital, who has been seriously ill with appendicitis, has gone to his home at Cream Ridge, N. J., to recuperate.

Philadelphia.

Dowieite in Jail.—On the charge of criminal neglect, which resulted in the death of his infant child, George Osborn, a faith-cure adherent, was sent to prison by the coroner, May 8, pending the action of the grand jury.

Jacobi Memorial.—Dr. Clara Marshall, dean of the Woman's Medical College of Pennsylvania, notifies us that in the report of the unveiling of the Jacobi Memorial, in the issue of June 1, the accepter on behalf of the corporators was Dr. Lillian Welsh of Philadelphia, not Dr. William Welch of Baltimore, as there stated.

Health Report.—The report of the bureau of health for the week ended June 1 shows 470 deaths, a decrease of 27 as compared with the previous week, and an increase of 56 over the corresponding week of last year. The principal causes of death were: Typhoid fever, 9; measles, 1; diphtheria, 8; cerebrospinal meningitis, 6; consumption, 66; cancer, 32; diabetes, 4; apoplexy, 17; heart disease, 38; acute respiratory disease, 54; enteritis, 27; appendicitis, 2; Bright's disease, 32; congenital debility, 12; suicide, 5; accidents, 10, and marasmus, 2. There were 117 cases of contagious disease reported, with 18 deaths, as compared with 177 cases and 19 deaths reported in the preceding week.

Personal.—Dr. S. Weir Mitchell has received the honorary degree of LL.D. from the University of Toronto, Canada.—— Dr. P. Brooke Bland has been appointed to the gynecologic staff of the Jefferson Medical College Hospital.——Dr. Charles S. Barnes has been appointed clinical gynecologist to the Garrettson Hospital.——Mr. William T. Elliott, president of the Central National Bank, was elected a member of the board of trustees of Jefferson Medical College, May 31.——Dr. Charles A. E. Codman has been elected attending physician at and Dr. S. MacCuen Smith consulting aurist to the American Oncological Hospital.——Dr. E. A. Abbott, Chief of the Bureau of Health, received the degree of D.Sc. from the University of Maryland, May 31.——Dr. Ernest Laplace has been appointed surgeon to the American Hospital for Diseases of the Stomach.——Dr. W. M. Late Coplin has been elected medical director of the Jefferson Hospital, vice Dr. Joseph Neff, who resigned to accept appointment as director of public health and charities.——Dr. William J. Roe has been appointed oral surgeon at the Philadelphia Hospital.

Alumni Meetings.—At the annual business meeting of the Alumni Association of Jefferson Medical College, June 1, the following officers were elected: President, Dr. J. Chalmers Da Costa; vice-presidents, Drs. Isador P. Strittmatter, Louis Jurist, Augustus A. Eshner and Lawrence F. Flick; recording secretary, Dr. Alfred Heineberg; corresponding secretary, Dr. Charles S. Barnes; treasurer, Dr. Randle C. Rosenberger, and chairman of the executive committee, Dr. P. Brooke Bland, all of Philadelphia. The annual banquet of the association was held on the evening of June 1 and was attended by 300 alumni.——The twenty-fifth annual banquet of the Alumni Association of the Medico-Chirurgical College was held May 30. The Rev. Dr. J. Henning Nelms delivered the address of the evening. Mayor Reyburn was one of the guests of honor.

TENNESSEE.

Commencements.—At the annual commencement exercises of the University of Tennessee, Medical Department, Nashville, a class of 42 received diplomas. Dr. W. E. McCampbell delivered the charge to the graduates, and Congressman L. G. Padgett delivered the commencement address.——The twenty-seventh annual commencement exercises of the Memphis Hospital Medical College were held April 27, when a class of 66 was graduated. The diplomas were presented by Hon. William H. Carroll, president of the board of trustees, and Governor Vardaman of Mississippi delivered the address of the day.——The twenty-second annual commencement of Vanderbilt University, Medical Department, Nashville, was held May 1. The faculty address was delivered by Dr. Richard A. Barr, the commencement address by Dr. J. B. Winton, and degrees were awarded to a class of 40.——The commencement exercises of Knoxville Medical College were held May 16. The doctorate address was delivered by Dr. Pinder M. Flack, Louisville, Ky. ——The East Tennessee Medical College, Knoxville, graduated a class of 15, May 23. No public commencement exercises were held.

College Moved.—The medical, dental and pharmaceutical departments of the University of West Tennessee, formerly located at Jackson, have been moved to Memphis. At the reorganization of the faculty, Apil 22, the following faculty was elected: Dr. Miles V. Lynk, president and professor of materia medica, therapeutics, forensic medicine and ethics; Dr. Robert G. Martin, secretary and professor of clinical medicine; Dr. Ernest W. Irving, treasurer and professor of principles and practice of medicine; Dr. Jacob C. Hairston, professor of didactic and surgical gynecology; Dr. A. L. Thompson, obstetrics; Dr. Cleveland A. Terrell, general surgery; Dr. Andrew N. Kittrell, anatomy; Dr. E. C. Craigen, physiology and hygiene; George R. Jackson, Ph.G., pharmacy; Mrs. B. S. Lynk, Ph.C., chemistry; Dr. F. E. Nesbit, eye, ear, nose and throat; Dr. Lawrence G. Patterson, histology and bacteriology; Dr. J. L. Delaney, pathology; Dr. Lucius S. Henderson, pediatrics; Dr. R. L. Adams, demonstrator of anatomy; Dr. A. D. Byas, physical diagnosis; Dr. W. H. Luster, chemical laboratory, and Drs. Robert G. Martin, Andrew N. Kittrell, G. F. Pinkston and Charles H. Shelby, clinical instructors.

TEXAS.

College Closed by Fever.—The State Agricultural and Mechanical College, Bryan, was closed May 25, on account of an epidemic of typhoid fever, of which 30 cases are reported.

Correction.—The president of the district society informs us that the statement in THE JOURNAL, May 25, regarding the prevalence of smallpox in Midland, was incorrect. He states that there had been but five cases in Midland County in the last three years.

Personal.—Dr. Frank D. Gray has been re-elected dean of the Fort Worth Medical College.——Dr. James A. Gibson, health officer of Jefferson County, who was tendered the appointment of quarantine officer at Velasco, has declined the appointment.——Drs. Thomas J. Bennett, William J. Mathews, Thomas R. Pettway, Frank Litten and Goodall H. Wooten have been appointed members of the board of health of Austin.

Warning from State Health Officer.—On May 24 the state health authorities began the inauguration of a system which, it is claimed, will keep yellow fever out of the state. The state health officer has issued orders to all inspectors along the Mexican border and at all Texas ports not to allow any passengers from Central or South America or Mexico to enter Texas without giving their names and destinations, and unless such passengers can give a satisfactory account of themselves they will be kept five days in detention.

Precautions Against Yellow Fever.—State Health Officer Brumby on May 24 addressed a letter to the general managers of the railroads of the state, urging the necessity of taking steps to "anticipate yellow fever by destroying all possible breeding places of the mosquito. No one," he says, "should be more interested in the prevention of yellow fever and its concurrent quarantine than the railroads of our state." He calls attention to the habits of the *Stegomyia calopus* and asks the

managers to order that all water containers in and about stations, warehouses and sheds, especially at terminals on the coast, be filled with salt water or screened, or that kerosene be poured on them once a week.

VERMONT.

Health Officers' School.—Dr. Henry D. Holton, secretary of the State Board of Health, has announced that the annual school for health officers of the state will be opened at Brattleboro, June 17 to 20 inclusive.

Communicable Diseases.—The school at Bridgeport has been closed on account of the prevalence of measles; 26 houses have been quarantined.——Two more cases of diphtheria have developed at St. Johnsbury Hospital.——The health officer of Berlin reports that 11 houses are now under quarantine for smallpox.——Several cases suspected to be smallpox are said to exist in Montpelier and West Northfield.

VIRGINIA.

Commencement.—The annual commencement exercises of the University College of Medicine, Richmond, were held May 20. The doctorate address was delivered by the Hon. R. T. Barton, Winchester. At a meeting of the Alumni Association of the University College of Medicine, Richmond, held May 20, Dr. Hugh McGuire was elected president, and Dr. Roshier W. Miller, Barton Heights, re-elected secretary-treasurer.——The annual commencement exercises of the Medical College of Virginia, Richmond, were held May 21, when a class of 26 was graduated. Rev. George W. M. McDaniel delivered the doctorate address.

Personal.—Dr. Charles E. Verdier has been appointed surgeon of the Norfolk Blues, succeeding Dr. Junius F. Lynch, recently promoted surgeon with the rank of major.——John H. Hinchman, Richmond; William A. Stole, Gold Hill, and D. G. C. Woodson, who are to graduate from medical colleges of Virginia, have been appointed ambulance surgeons for Richmond.——Dr. Lonsdale J. Roper, Norfolk, has been appointed surgeon to the King's Daughters Hospital in that city.——Dr. H. Aulick Burke, Petersburg, has been appointed resident physician at St. Vincent's Hospital, Norfolk.——Dr. J. W. Stephenson has been appointed resident physician at Memorial Hospital, Norfolk.

WASHINGTON.

Meningitis Epidemic Abating.—Dr. Augustin de Y. Green, city health officer of Tacoma, reports that since February there have been 50 deaths from cerebrospinal meningitis in Tacoma, and six or eight recoveries. The epidemic is believed to have materially abated.

State Pure Food Law.—The pure food law recently enacted by the legislature is nearly identical in its essential features with the national Pure Food and Drugs Act. Any food or drugs, the sale of which is prohibited by this law, may be seized by the legislature is nearly identical in its essential features of any food or drug sold must be furnished by the dealer or the manufacturer to the state on demand for analytic purposes. The chemist of the state agricultural experiment station is required to make all analyses necessary for the state. Articles of food may be taken from any hotel, restaurant, etc., and subjected to analysis, and if found sophisticated the owner may be prosecuted. The penalty for violating the law is, for the first offense, a fine ranging from $25 to $500, and for subsequent offenses, imprisonment.

WISCONSIN.

Commencement.—The fourteenth annual commencement exercises of the Milwaukee College of Physicians and Surgeons were held May 20, when a class of 23 was graduated.

Personal.—Dr. Newton I. Tibbitts has been appointed health officer of Peshtigo.——Dr. George T. Dawley, New London, was thrown from a bicycle recently, fracturing one of his ribs.——Dr. Kilian T. Bauer, Milwaukee, has been appointed interne at the Milwaukee Maternity Hospital.

Tuberculosis Hospital.—The committee in charge of the movement to raise $25,000 for a tuberculosis sanatorium reports subscription of more than $10,000.——An exhibit will be open in a few days at Milwaukee, consisting of pictures, charts, models, literature and other matter relating to the control of tuberculosis, under the auspices of the Milwauke Tuberculosis Association.

GENERAL.

Yellow Fever in Cuba.—According to the official notification, May 28, yellow fever exists in Havana and Matanzas provinces, Cuba. Quarantine has been established and vessels arriving at New Orleans will be required to undergo the usual term of detention.

Resolutions Regarding Dr. Solly.—At a meeting of the board of directors of the National Association for the Study and Prevention of Tuberculosis, held in Washington, May 7, resolutions were unanimously adopted regarding the death of Dr. S. Edwin Solly, Colorado Springs, formerly a member of the board.

Mortality of Havana for April.—The total mortality of the municipal district of Havana in April was 632, with a daily mortality of 21.06, equivalent to the annual death rate of 27.46 per 1,000 inhabitants. The diseases that caused the greater number of deaths are as follows: Circulatory system, 121; tuberculosis, 108; acute bronchitis, broncho-pneumonia and pneumonia, 49; enteritis (under 2 years), 49; simple meningitis, 45; cancer, 26; congenital debility, 26; cerebral congestion and hemorrhage, 11; measles, 11; Bright's disease, 10; grip, 9; enteritis (2 years and over), 9; diphtheria, 7; myelitis, 7; convulsions (under 5 years), 7; cirrhosis of the liver, 7; hepatitis, 7.

CANADA.

Indian Doctor Acquitted.—Chief Hill of the Six Nations Indians, of Brantford, Ont., who was recently brought before the police magistrate, charged with illegally selling medicine and practicing as a physician, has been discharged on the ground that an Indian does not come under the statutes of Ontario. The Ontario Medical Council has decided to appeal the case.

Smallpox in Ontario.—Dr. Bell, inspector of the Provincial Board of Health, has completed an investigation into the outbreak of smallpox in several townships in the counties of Leeds and Greenville.——Two schools in Regina, Sask., have been closed on account of smallpox.——Smallpox was discovered May 15 in the Nova Scotia Hospital for the Insane, Dartmouth, where an attendant was taken ill. The hospital is under quarantine.——Audubon township, Sandwich West, is reported to have 64 cases of smallpox.

Personal.—Dr. Frank England, Montreal, and Dr. W. S. England, Winnipeg, are visiting the hospitals of Baltimore, Philadelphia and New York.——Dr. Stewart Mackid, Calgary, Alberta, has returned from a year's graduate work in the hospitals of Berlin, Paris, Vienna and London.——Dr. McLeod of Stonewall, Man., is visiting in Japan.——Dr. John Matheson, Brandon, Man., has returned from a course in surgery in Chicago and New York.——Dr. Victor Wilnams, Winnipeg, has gone abroad for graduate work in eye, ear, nose and throat, in England, Ireland, Scotland and Germany.

FOREIGN.

Personal.—Charles A. Ballance, F.R.C.S., London, one of the leading specialists in brain surgery in the United Kingdom, was operated on for an attack of acute gangrenous appendicitis about six weeks ago, and has made a good recovery.

Extension of Scottish Hospital.—The addition to the Glasgow Samaritan Hospital was formally opened recently. The new wing contains four large wards with accommodation for ten beds each, and four smaller wards with space for three and two beds each, two large convalescent rooms and two well-equipped operating theaters. The administrative block between the old and new buildings has also been remodeled.

Stiebel Prize Awarded to Vulpius.—The Stiebel prize is awarded every fourth year at Frankfurt a. M. for the best work on pediatrics or embryology. It amounts to about $104, and was bestowed this year on O. Vulpius of Heidelberg for his work on "Tendon Transplantation and Its Application in Treatment of Paralysis," published in 1902. He turned the sum over to the fund which is being collected to found a home for cripples in Heidelberg.

Plague in India.—Despite the strenuous efforts on the part of the Indian government to stamp out the disease the plague still continues to ravage the country, as it has done now for over ten years. The total deaths for the period from October, 1896, to December, 1906, number 4,411,704. It has been established that practically the only disseminators of the plague are the rats and rat fleas. The natives, unfortunately, instead of cooperating with the authorities in trying to exterminate the rats, feed the rodents and allow them to propagate freely. The native population is also opposed to inoculation—the only safe protection against the ravages of the disease.

Government Sale of Quinin in Italy.—As has previously been mentioned in these columns, the Italian government supplies quinin practically at cost to all consumers, and it can be obtained at all the postoffices throughout the kingdom. The amount thus sold last year was 18,712 kilograms, nearly 40,000 pounds. The net profit amounted to 293,295 lire, nearly $60,-

000. This sum has been set aside to promote malaria prophylaxis in Italy and to give prizes to proprietors who take pains to protect their workmen against malaria. Five such prizes were awarded last year, each of $100, and $6.000 was given to the Italian Red Cross for the antimalaria campaign this year.

Campaign Against Infant Mortality in Germany.—The German authorities report that the mortality among infants averaged 19.8 per cent. throughout the empire during 1906. In Bavaria the proportion was 25 per cent.; in Prussia, 19.4 per cent. In France for the corresponding period it was 13.7 per cent.; in Sweden, 8.6, and in Norway only 7.9 per cent. In the United Sta es, for 1900, the infant mortality was 14.94 per cent., but it was only 13.5 per cent. in American white families. The high infant mortality in Germany has long been recognized and energetic measures are now under way to reduce it. In Charlottenburg, where the proportion is 28.6 per cent., land has been donated and subscriptions collected to found a large model, central institution for scientific study of the most approved means of caring for and raising infants and educating mothers for this task. The scheme includes a "mothers' dispensary" and exhibition of everything connected with the care of infants. Nearly $250,000 has already been contributed, but four times this amount will be required to equip the institution as planned. A representative committee from all the states of the empire has charge of this campaign against infant mortality, and a conference was recently held at Berlin in the parliament buildings to discuss ways and means. Several "mothers' dispensaries" are already in successful operation in German towns, modeled on the French "infant consultations." They are regarded as important also from the standpoint of training medical students to give practical advice to mothers and nurses in regard to the rearing of infants. As mentioned elsewhere, the French authorities have decreed the extension of the system throughout France. In all the "consultations" already established it is the universal experience that the mothers are inclined to err on the side of feeding the children too often and too much.

LONDON LETTER.

(From our Regular Correspondent.)

LONDON, May 18, 1907.

The Declining Birth Rate.

The birth rate continues to decline. The figures for 1906, just issued, show that the marriage rate was 15.6 per 1,000, 0.3 above that for 1905 but 0.2 below the decennial average. The birth rate was 27, being 0.2 below that of 1905, and the lowest on record. On the other hand, the death rate was 15.4, 0.2 higher than in the previous year but 1.4 less than the decennial average. The fall in the birth rate of London is still more remarkable. The rate was 26.7 per 1000, the lowest ever recorded. Calculated on the base of possible mothers, the fall in the birth rate in the past 36 years amounts to no less than 27 per cent., or, taking married women alone, to 22 per cent. Put in another way, if the fertility of married women in proportion to their numbers was identical in 1870-72 and in 1906 the legitimate births would have numbered nearly 156,000 instead of 120,814. Twenty per cent. of the decline in the birth rate is due to decrease in the proportion of married women in the adult female population and 5 per cent. to decrease in illegitimacy. With regard to the remaining 75 per cent. the report states that "there can be no doubt that much of it is due to deliberate restriction of child bearing."

The Anti-Tuberculosis Campaign.

At the annual dinner of the National Association for the Establishment and Maintenance of Sanatoria for Workers Suffering from Tuberculosis, the report presented showed good progress. The object is to establish sanatoria where the members of the working class can be sent while suffering from tuberculosis in its early stage. These institutions it is proposed to establish by means of cooperation of friendly societies, trades unions, and other organizations. It is hoped that they will become self-supporting so that patients will feel that they are not subsisting on charity. Appeal is now made for support only for the provision of the necessary buildings. The societies involved comprise about 3,000,000 workers, irrespective of their wives and families. A special feature of the scheme is that while the breadwinner of the family is being treated at the sanatorium his wife and children receive the whole of the sick pay which he would have received under the old system. This is provided for by an extra self-imposed levy on the members of the society. This scheme is the first serious attempt to emulate the German system of workmen's insurance. The first or model sanatorium under the scheme, containing 200 beds, has been opened at Benenden, Kent.

VIENNA LETTER.

(From our Regular Correspondent.)

VIENNA, May 17, 1907.

A New Lupus Hospital in Vienna.

The plans for the new hospital for lupus have been definitely approved by the commission appointed for this purpose, and as the time for construction has been shortened, it will be ready in a few months. It will provide accommodations for from 80 to 90 in-patients and a large and spacious out-patients' hall, 20 Finsen lamps and all the latest equipment for modern photo-therapeutic measures will be installed. A surgical ward, together with an operating theater and a laboratory for chemical and biologic research, will be added to it. A novel feature in this kind of a charitable institution is the home or "refuge" as it is called. This is a pavilion in the grounds of the hospital, communicating with the garden and capable of accommodating 70 lupus patients, who while not bedridden, find it undesirable to mix with the street crowd. The present lupus hospital is but a small institution compared with the one to be erected, but still it does an enormous amount of good. As it is partly a private institution, certain fees are charged for treatment, although the sum is very low. Thus $1 daily is the maximum fee for an in-patient, while many patients are paid for by the state. The present director is Professor Lang, whose surgical method of treating lupus was at one time the best and only method of treatment. The cost of the new hospital will be defrayed partly by the state hospital fund, partly by the government, and partly by donations and voluntary contributions.

Correspondence

Physical Examination for Entrance to West Point.

WASHINGTON, D. C., May 29, 1907.

To the Editor:—Boards of medical officers for the physical examination of candidates for admission to West Point are appointed each year by the Secretary of War at various military posts, scattered over the country, and so situated as to be nearest the homes of the respective candidates. These boards consist of one or more medical officers of experience in the service and with practical knowledge of the requirements for officers of the Army. When candidates are rejected by the boards they are often taken at once by parents or friends to more or less prominent civilian practitioners, usually specialists, and it frequently happens that these physicians give certificates flatly contradicting the findings of the boards of medical officers of the Army. While there is no question of the integrity and honesty of purpose of these civilian practitioners, it does not seem quite fair that they should give such certificates without full and careful inquiry into all the circumstances of the case, and communication, if possible, with the medical officers concerned. It should be borne in mind that these officers have special knowledge of the requirements of the military service and approach this examination from the side of protection of the government's interests, while the civil physician is necessarily more or less influenced by the point of view of his patient. Moreover, it is believed that impersonation is sometimes resorted to in circumstances of this sort, and it certainly behooves a careful physician to go slowly before committing himself to a certificate contradicting one already given by his brother practitioners of the Army.

CHARLES F. MASON, Major, Surgeon, U. S. Army.

Rubber Tube Percussion.

MONROVIA, CAL., May 25, 1907.

To the Editor:—In replying to Dr. Klebs' article in THE JOURNAL, April 6, 1907, page 1187, relative to "Rubber Tube Percussion," I prefer to discuss the merits of the question only, as sarcasm has no bearing on scientific truths. I am aware of the fact that I did not enter into a careful discussion of all the minute details connected with the theories of percussion in the short article in which I described the use of the new method. I simply called attention to the method in the hope that other men might give it a fair trial and determine its value.

Percussion of the chest by ordinary methods is at best unsatisfactory; and, as practiced by many physicians, is unreliable and worthless. During recent years I have acquainted myself with most of the different varieties of percussion and have compared my findings by one with that of the others. I find that the various methods have different value under different circumstances. By being conversant with more than one method one is able to do more accurate work.

The value of a method depends on the proficiency of the examiner and his ability to interpret sounds. No two methods offer the same sounds under the same circumstances, so when one wishes to acquaint himself with a new method he must not be surprised to find that the technic of the new method is somewhat "bothersome" and the new sounds confusing. Like all other methods, it requires practice in order to familiarize one's self with the best method of delivering the stroke and to be able properly to interpret the sound. We must either look on Dr. Klebs as an expert on percussion or consider his criticism and condemnation as hasty. Before describing the method, I employed it in making more than 1,000 careful examinations, and checked it by all other methods with which I am conversant. Dr. Klebs, on the other hand, read my description in THE JOURNAL, March 23, tried the method and had it condemned in time to have his criticism appear April 6.

The fact that many of my colleagues to whom I have demonstrated this method are reporting good results from it confirms my opinion that it is of value. Contrary to the opinion of Klebs, I find it most valuable in determining small apical foci, and have used it most successfully in mapping out the apical outline. I have secured best results by using the soft, flexible rubber tubing, by using a light stroke and allowing the tubing to remain in contact with the chest wall.

I do not suggest it as a method to supplant others, but one to be used in conjunction with them.

F. M. POTTENGER, M.D.

"Proven."

LOS ANGELES, CAL., May 23, 1907.

To the Editor:—Although the rank and file of physicians are educated men, it is nevertheless somewhat surprising how many of them who write and speak publicly, tumble headlong into the habit of using the incorrect expressions and spelling employed by others, without considering accuracy. This is especially true when the example is set by an author who is supposed to be authority on English as well as on medicine.

An instance of this is seen in the use of the word proven, the past participle of the word prove. In the discussions in medical meetings and in medical books, the word occurs with surprising frequency. This was noticed recently in a medical work written by twenty-two authors, only one of whom used the expression correctly. I say correctly, taking the Standard Dictionary as authority, which under this word proven, reads: "An improper form of proved—an improper form lately growing in frequency by imitation of the Scotch form of 'not proven' in legal parlance." WILLIAM H. DUDLEY, M.D.

State Aid for Private Medical Schools.

DETROIT, May 27, 1907.

To the Editor:—The remarks on this subject in THE JOURNAL, May 25, suggest to me that there exists another viewpoint besides that taken by the esteemed correspondent. The state, in my opinion, should not support any private medical school, because state support of private medical schools would be, I think, a most flagrant mistake from a national economic standpoint. Medical schools should be state institutions. It is to be regretted that the excellency of some private medical schools and the small number of state medical schools furnish a temporary excuse for the existence of the former. "It is not fair," says the correspondent, "that the owners of these schools should be taxed to support state schools." I think that it would be still less fair that the whole community should be taxed to support private medical schools. It would be taxation without due representation, so to speak. No doubt some private medical schools have done and are doing excellent work. The tendency of our time, however, it would seem, is toward state schools. Nobody, to my knowledge, has ever officially asked a number of men to establish a private medical school; at least, no act of any legislature is known to me, at the present time, covering this point. If any reimbursement should be asked for by any private medical school for abandoning its property—I am speaking generally—it could be properly done only under one condition and in only one way, in my opinion. The condition would be, that the various state legislatures could possibly come to an understanding that some private medical schools, by virtue of their work in the past, or at present, are entitled to some kind of a consideration. The way would be, that the state, in case the private medical schools can not hold their own any longer, would take over the property and adequately compensate the owners.

EMIL AMBERG, M.D.

Paralysis Following Removal of Gasserian Ganglion.

SAN FRANCISCO, May 27, 1907.

To the Editor:—In THE JOURNAL, May 11, Dr. Miles A. Porter reports a case of paralysis of the facial nerve after the removal of the Gasserian ganglion for tic douloureux.

In THE JOURNAL, Dec. 7, 1901, I reported a similar case. My patient was the first on whom I had done the operation, and the technic was practically that of the Hartley-Krause operation, with the high incision, the osteoplastic flap and the non-interference with the zygoma.

In the report of my case of paralysis of the seventh nerve following an operation on the ganglion of the fifth, I excluded certain possible rough causes, and ended by offering no explanation for the occurence. I am in the same position to-day. I do not know why it happened. My patient, who must have been operated on in 1897 or 1898, is, I believe, alive and well to-day, is free from his neuralgia and his face is still paralyzed.

I can not accept Mr. Harold Mouser's explanation of the paralysis in Dr. Porter's case. The chorda tympani is implicated in neither the peripheral nor the deep operation. It is very unlikely that traction on the third branch, to draw the cut end into the skull, as Dr. Porter says he did, but as I did not do, could be transmitted through the devious chorda tympani to the main trunk of the seventh nerve and traumatize the latter so as to paralyze it. I am more inclined to believe that there was, in these two patients, some unusual course of the seventh nerve. HARRY M. SHERMAN, M.D.

2210 Jackson Street.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending June 1, 1907:

Hathaway, L. M., asst.-surgeon, granted leave of absence for thirty days.

Bourke, James, asst.-surgeon, relieved from duty on the U. S. Transport *Sumner*, and assigned as surgeon of the U. S. Transport *Kilpatrick*.

Vedder, Edward B., asst.-surgeon, relieved from duty at Fort Douglas, Utah, and ordered to Fort Walla Walla, Wash., for duty.

Powell, Junius L., surgeon, relieved from duty in the Philippines Division, about Aug. 15, 1907, and ordered to Fort Ethan Allen, Vt., for duty.

Mearns, E. A., surgeon, relieved from duty in the Philippines Division, about Aug. 15, 1907, and ordered to Fort Totten, N. Y., for duty.

Morse, A. W., Gosman, G. H. R., Owen, L. J., Zinke, S. G., Culler, R. M., Weed, F. W., Freeman, P. L., asst.-surgeons, relieved from duty in the Philippines Division, about August 15, and will proceed to San Francisco, Cal., for orders.

Whaley, A. M., asst. surgeon, ordered to accompany 26th Infantry from Fort Sam Houston, Texas, to San Francisco, Cal., and then return to his post.

Willcox, Charles, surgeon, granted thirty days' leave of absence.

Miller, E. W., asst.-surgeon assigned to temporary duty as surgeon, transport *Kilpatrick* during voyage beginning May 22, from Havana, Cuba, to Newport News, Va., and return to Cuba.

Lambert, S. E., asst.-surgeon, left Fort Logan, Colo., on thirty days' leave of absence.

Bosley, J. R., asst.-surgeon, granted seven days' leave of absence.

Howard, D. C., surgeon, relieved from duty at Army General Hospital, Washington Barracks, D. C., and ordered to Philippine Islands, for duty on the transport sailing from San Francisco, Cal., about Sept. 5, 1907.

Arthur, W. H., surgeon, detailed to represent the medical department of the Army at the fifty-eighth annual meeting of the Ameri-

can Medical Association, to be held at Atlantic City, N. J., June 4-7, 1907.

Little, W. L., asst.-surgeon, granted two months' leave of absence, to take effect about Aug. 1, 1907.

Smart, Robert, asst.-surgeon, is honorably discharged from the service of the United States, to take effect June 29, 1907.

Russell, F. F., asst.-surgeon, detailed to represent the medical department of the Army at the fifty-eighth annual meeting of the American Medical Association, to be held at Atlantic City, N. J., June 4 to 7, 1907.

Morris, E. R., surgeon, granted three months' leave of absence on surgeon's certificate of disability.

Girard, Jos. B., asst.-surgeon general, relieved from duty as chief surgeon, Department of the Gulf, and will proceed to San Antonio, Texas, and report for duty as chief surgeon, Department of Texas, on the departure of Col. Louis M. Maus, asst.-surgeon general.

Gray, W. W., deputy surgeon general, so much of Par. 14, S. O. 91, April 18, 1907, War Department, as directs him to proceed to Omaha, Neb., for duty as chief surgeon, Department of the Missouri, is revoked, and he will report for duty as chief surgeon, Department of the Gulf.

Jarrett, A. R., contracting surgeon, ordered to duty at target camp, Creedmoor, Long Island.

Brown, W. E., contract surgeon, relieved from duty at Fort Walla Walla, Wash., and ordered to the Army General Hospital, Fort Bayard, N. M., for duty.

Koyle, F. T., contract surgeon, relieved from duty in the Department of California, and ordered to sail July 5, for Manila, P. I., for duty in the Philippines Division.

Henning, O. F., contract surgeon, left Fort Barrancas, Fla., on leave of absence for twenty days.

Williamson, J. W., contract surgeon, granted leave of absence for two months.

Van Kirk, H. H., contract surgeon, leave of absence extended to July 1, 1907.

Stephenson, A. V., contract surgeon, left Presidio of San Francisco, Cal., for duty at Fort Miley, Cal.

Smith, W. H., and Lincoln, H. F., contract surgeons, ordered from St. Louis, Mo., to Fort Leavenworth, Kans., for duty.

Stallman, G. E., dental surgeon, left Fort Reno, Okla., for duty at Fort Sill, Okla.

Hussey, S. W., dental surgeon, relieved from duty in the Philippines Division in time to sail for San Francisco, Cal., on the first transport after August 1, granted leave of absence for two months, to take effect on arrival in the United States.

Voorhies, H. G., dental surgeon, ordered from San Francisco, Cal., to Fort D. A. Russell, Wyo., for duty.

Wing, F. F., dental surgeon, relieved from duty at Fort D. A. Russell, Wyo., in time to sail July 5, from San Francisco, Cal., for Philippine service.

Navy Changes.

Koltes, F. X., asst.-surgeon, ordered to Mare Island Yard, Cal.

Neville, R. P., pharmacist, having been examined by retiring board and found incapacitated for active service on account of disability incident thereto, is retired from active service May 23, under provisions of Sec. 1453 R. S.

Decker, C. J., surgeon, sick leave further extended three months from May 23.

Richardson, R. R., P. A. surgeon, detached from the *Boston*, when placed out of commission and ordered to the *Albany* when placed in commission.

Marsteller, E. H., surgeon, sick leave further extended six weeks, from May 28.

Smith, W. R., P. A. surgeon, detached from the *Raleigh* and ordered to the *Helena*.

Stoopes, R. E., asst.-surgeon, detached from the *Concord* and ordered home.

Owens, W. D., asst.-surgeon, detached from the *Villalobos* and ordered home.

Grayson, C. T., asst. surgeon, detached from the *Maryland* and ordered home.

Winn, C. K., asst.-surgeon, ordered to the *Villalobos*.

Raison, T. W., asst. surgeon, ordered to the *West Virginia*.

Cohn, I. F., asst.-surgeon, ordered to the *El Cano*.

Butts, H., asst.-surgeon, ordered to the *Maryland*.

Eytinge, E. C. J., asst.-surgeon, detached from the *El Cano* and ordered to the *Concord*.

Wheeler, L. H., asst.-surgeon, detached from the *Helena* and ordered to the *Raleigh*.

Public Health and Marine-Hospital Service.

List of changes of stations and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended May 29, 1907:

White, J. H., surgeon, detailed to attend meeting of the American Society of Tropical Medicine, Philadelphia, Pa., June 7.

McIntosh, W. P., surgeon, granted leave of absence for one day, May 24.

Rosenau, M. J., P. A. surgeon, detailed to attend meeting of the American Medical Association, and also the Section on Pathology and Physiology, June 4-8, 1907.

Wickes, H. W., P. A. surgeon, directed to proceed to Perth Amboy, N. J., June 18, for the purpose of assuming temporary charge of the service during the absence of Assistant Surgeon Mullan.

Anderson, John F., P. A. surgeon, directed to proceed to Savannah, Ga., for special temporary duty in connection with the outbreak of typhoid fever.

Robinson, D. E., P. A. surgeon relieved from duty at Baltimore, and directed to proceed to Ellis Island, N. Y., reporting to the chief medical officer for duty.

Wille, C. W., P. A. surgeon, granted leave of absence for eight days, from May 12, 1907.

Berry, T. D., P. A. surgeon, granted leave of absence for one day.

McLaughlin, A. J., P. A. surgeon, granted leave of absence for two months, from July 1, 1907.

Burkhalter, J. T., P. A. surgeon, relieved from duty at Ellis Island, N. Y., and directed to proceed to Baltimore, Md., reporting to the medical officer in command for duty and assignment to quarters.

McCoy, G. W., P. A. surgeon, directed to proceed to Bransford, and other places in Tennessee, for special temporary duty; on completion of which to rejoin his station at the Hygienic Laboratory.

Mullan, E. H., asst.-surgeon, granted leave of absence for two days, from June 18.

Olsen, E. T., asst.-surgeon, relieved from duty at Chicago, Ill., and directed to proceed to Ellis Island, N. Y., reporting to the chief medical officer for duty.

Bailey, C. W., acting asst.-surgeon, granted extension leave of absence for five days, from May 27, 1907.

Glascock, Alfred, acting asst.-surgeon, granted extension leave of absence for three days, from May 29, 1907.

Hunter, W. R., acting asst.-surgeon, granted leave of absence for two days, from May 25, 1907.

Owen, Henry, acting asst.-surgeon, granted leave of absence for thirty days, from June 1, 1907.

Tarbell, B. C., acting asst.-surgeon, granted leave of absence for ten days, from April 15, 1907.

Watson, H. J., acting asst.-surgeon, granted leave of absence for thirty days, on account of sickness, from Jan. 22, 1907.

Watson, H. J., acting asst.-surgeon, granted leave of absence for thirty days, from Feb. 21, 1907.

Wright, F. T., acting asst.-surgeon, granted leave of absence for fifteen days, from May 28, 1907, and excused for a further period of fifteen days, without pay, from expiration of said leave.

BOARD CONVENED.

A board of medical officers was convened to meet at Vancouver, B. C., June 8, 1907, for the purpose of examining a person suspected of being afflicted with trachoma. Detail for the board: Surgeon W. G. Stimpson, chairman; P. A. surgeon J. H. Oakley, and P. A. Surgeon W. C. Billings, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended May 31, 1907:

SMALLPOX—UNITED STATES.

California: San Francisco, May 11-18, 1 case.

Florida: Duval County, Jacksonville, May 11-18, 2 cases; Hillsboro County, Tampa, May 11-18, 4 cases.

Illinois: Chicago, May 11-25, 13 cases; Danville, May 16-23, 4 cases; Springfield, May 16-23, 2 cases.

Indiana: Elkhart, May 11-18, 6 cases; Lafayette, May 13-20, 1 case; South Bend, May 11-18, 3 cases, 1 death.

Kansas: Kansas City, May 11-25, 5 cases.

Kentucky: Covington, May 15-22, 1 case; Louisville, May 16-23, 4 cases.

Louisiana: New Orleans, May 11-18, 7 cases (4 imported).

Massachusetts: Lawrence, May 11-18, 1 case.

Michigan: Detroit, May 18-25, 4 cases; Saginaw, May 11-18, 5 cases.

New York: Niagara Falls, May 11-18, 1 case.

North Carolina: Greensboro, May 11-18, 8 cases.

South Carolina: Camden, May 12-19, 1 case.

Texas: Galveston, May 17-24, (10 cases, imported on S. S. *Hanover*); Laredo, May 13-17, 1 case (imported); San Antonio, May 4-11, 1 case.

Washington: Spokane, May 11-18, 20 cases (1 imported).

Wisconsin: Milwaukee, May 11-18, 6 cases.

SMALLPOX—FOREIGN.

Brazil: Manaos, April 27-May 4, 10 cases; Para, April 27-May 11, 6 cases, 2 deaths; Pernambuco, March 15-31, 60 deaths.

Chile: Coquimbo, April 27, 1 case; Iquique, April 27, present.

China: Hongkong, April 6-13, 20 cases, 16 deaths.

Egypt: Cairo, April 23-29, 2 cases, 1 death.

France: Marseilles, April 1-30, 170 deaths; Nice, April 1-30, 15 cases, 4 deaths; Paris, May 4-11, 12 cases, 5 deaths.

Germany: General, April 28-May 4, 9 cases.

Great Britain: Cardiff, May 4-11, 1 case; Southampton, May 4-11, 1 case.

India: Bombay, April 23-30, 1 death.

Italy: General, May 2-9, 50 cases.

Madeira: Funchal, May 5-12, 31 cases, 9 deaths.

Mexico: Mexico City, April 20-27, 16 deaths.

Portugal: Lisbon, May 4-11, 6 cases.

Russia: Odessa, April 20-27, 7 cases, 2 deaths; Riga, Feb. 1-28, 6 deaths; April 27-May 11, 16 cases.

Spain: Barcelona, May 1-10, 3 deaths; Cadiz, April 1-30, 3 deaths; Huelva, April 1-30, 4 deaths; Seville, April 1-30, 3 deaths; Valencia, April 28-May 12, 25 cases, 2 deaths.

Turkey: Bagdad, April 6-13, present.

YELLOW FEVER.

Brazil: Manaos, April 20-27, 1 death; Para, April 28-May 12, 9 cases, 6 deaths.

Cuba: San Nicolas, Habana Province, May 21, 1 case.

West Indies: Trinidad, Port of Spain, May 4-11, 2 cases, 2 deaths.

CHOLERA.

India: Bombay, April 23-30, 2 deaths; Rangoon, April 13-20, 9 deaths.

PLAGUE—INSULAR.

Hawaii: Honolulu, May 22, 1 case, 2 deaths.

PLAGUE—FOREIGN.

Arabia: Bahrien Island, April 21-27, 7 cases, 4 deaths; Camaran, April 19-30, 4 cases, 2 deaths.

Brazil: Para, May 4-11, 1 case, 1 death; Pernambuco, March 15-31, 1 death.

Chile: Antofagasta, April 27, 16 cases, 6 deaths.

China: Hongkong, April 6-13, 3 cases, 3 deaths.

India: General, April 16-20, 86,991 cases, 76,647 deaths; Bombay, April 23-30, 343 deaths; Rangoon, April 13-20, 99 deaths.

Peru: Chiclayo, April 18, 2 cases, 1 death; Chosica, April 18, 1 case; Ferrenhafe, April 18, 3 cases, 2 deaths; Lima, April 18, 8 cases, 5 deaths; Paita, April 18, 4 cases, 1 death; Trujillo, April 18, 3 cases, 3 deaths.

Turkey in Asia: Djeddah, April 15-May 5, 36 cases, 34 deaths.

Association News

THE ATLANTIC CITY SESSION.

(By Telegram Tuesday).

Monday was rainy but Tuesday is clear and warmer. The cold doubtless kept many away. The weather is too cold for outings. Registration Tuesday night was 2,776; at Boston at the end of the first day's session it was 3,768 and at Atlantic City in 1904, it was 2,240.

HOUSE OF DELEGATES.

Official Minutes of First Meeting—Tuesday, June 4.

The House of Delegates convened in the assembly hall of the Hotel Traymore at 10:15 a. m., and was called to order by the President, Dr. William J. Mayo.

Dr. Walter B. Dorsett, St. Louis, Mo., Chairman of the Committee on Credentials, presented a preliminary report, giving the names of all members who had thus far presented their credentials.

The minutes of the previous annual session were read. Dr. Philip M. Jones, California, moved the adoption of the minutes of the last session. This motion was seconded by Dr. Frank Billings, Chicago, and was carried.

The President then delivered his Address.

President's Address.

To the Members of the House of Delegates of the American Medical Association.

Gentlemen:—Following the example of my distinguished predecessors, I shall take advantage of the opening of the House of Delegates to direct the attention of this body to some matters which will come up before it for careful consideration. It is certainly a wise provision, which relieves the President from anything more than the superficial direction of the affairs of the Association and places the real responsibility on the Board of Trustees, whose prolonged tenure of office enables them to control properly the business of the House of Delegates.

The American medical profession is to be congratulated on the extraordinary influence for good brought about by this organization, largely through the efforts of the Secretary-Editor, Dr. George H. Simmons. By virtue of my office I have been thrown in close association with Dr. Simmons, and I take this occasion to express publicly my high admiration for him and his work. His courage in fighting for the best interests of the profession as a whole, often at a personal sacrifice, must commend itself to every right thinking man.

THE JOURNAL, of which he is the guiding spirit, is the greatest medical periodical the world has eve. known, having a circulation ot almost 50,000. During the past year I have met a large number of distinguished f reign men of our profession, and I can assure you that t eir appreciation of the high scientific standard of our official organ has been most gratifying. To the efficient Chairman of the Committee on Organization, Dr. J. N. McCormack, the Association a d.bt of gratitude. His rare insight into the necessities of the profession, and his grasp of the essentials which are necessary to give to medicine a commanding influence with the public at large make his work extraordinarily valuable.

And, finally, I must pay tribute to the Board of Trustees, not in the perfunctory expressions of one who is about to sever slight official connection with them, but rather as one who wishes to express his real appreciation of their wise control of the affairs of the Association, a control which has enabled the American Medical Association to become the largest and most powerful medical organization in the world.

Among the important matters which are to come up before you, I would like to direct your especial attention to four problems:

First: The report of the Committee on Medical Education. This question is perhaps the most vital of all, for the future of the medical profession lies in the character and training of the young men who go to fill up its ranks. The time has gone by when any band of men, even if their motives are of the highest, shall be allowed to organize a medical college, and at their own free will, give the title of "Doctor of Medicine." While the Association has no legal authority in this matter, its weight, if brought to bear as a moral force, should be sufficient to correct these evils.

Second: The Council on Pharmacy and Chemistry is doing a work of unexampled importance for the men who are now engaged in the practice of medicine. The proprietary medicine habit of physicians has been in its way even more scandalous than the "patent-medicine" habit of the public at large, because we are at least, supposed to know better. The work of the Council on Pharmacy and Chemistry should be encouraged by every means in our power. We should not only expose the fraudulent character of the claims of the proprietary people, but we should also encourage the honest firms which are making scientific preparations of known composition.

Third: The question of fees for the examination of life insurance should be amicably adjusted if possible. This matter concerns at least 10 per cent. of the profession and has been the cause of much feeling within our ranks. There are indications that some of the large insurance companies would be glad to adjust the differences. Your Committee on Insurance has a report to make on this subject, and I believe that the profession at large would accept without question the unanimous action of the House of Delegates.

Fourth: I would recommend that a committee be appointed to consider measures for expediting the business of the House of Delegates. A large amount of work could be delegated to the committee, which should be appointed months in advance, so that a well-digested report could be promptly presented to this body for action. Our delegates are among the busiest men in the scientific sections and the sacrifice necessitated by serving in this capacity should be lessened, if possible. A full day's work on Monday, two sessions on Tuesday, another on Thursday, and, if necessary, another on Friday, should enable the House of Delegates to dispose of its business, leaving Wednesday at least entirely free for work in the Sections.

Reference Committees Appointed.

COMMITTEE ON MEDICAL EDUCATION.

F. B. Lund, Massachusetts, Chairman.

Charles L. Mix, Illinois. Stuart McGuire, Virginia.
H. L. Elsner, New York. S. Solis-Cohen, Pennsylvania.
(Members of the Council on Medical Education are members ex-officio of this committee.)

COMMITTEE ON AMENDMENTS TO CONSTITUTION AND BY-LAWS.

George W. Guthrie, Pennsylvania, Chairman.

C. E. Cantrell, Texas. R. C. Cabot, Massachusetts.
R. L. Nourse, Idaho. G. L. Taneyhill, Maryland.

COMMITTEE ON REPORTS OF OFFICERS.

A. Jacobi, New York, Chairman.

Donald Campbell, Montana. W. T. Sarles, Wisconsin.
Philip Mills Jones, California. W. W. Richmond, Kentucky.

COMMITTEE ON CREDENTIALS.

Walter B. Dorsett, Missouri, Chairman.

Wisner R. Townsend, New York. E. K. Williams, Arkansas.
H. Bert Ellis, California. A. B. Walker, Ohio.

COMMITTEE ON SECTION AND SECTION WORK.

Leartus Connor, Michigan, Chairman.

John T. Rogers, Minnesota. George R. Shepherd, Connecticut.
S. W. Woodyard, Tennessee. John Darrington, Mississippi.

COMMITTEE ON RULES AND ORDER OF BUSINESS.

William H. Sanders, Alabama, Chairman.

W. Fred Essig, Washington. Victor H. Stickney, North Dakota.
L. E. Bowers, Kansas. John M. Gile, New Hampshire.

COMMITTEE ON LEGISLATION AND POLITICAL ACTION.

C. S. Bacon, Illinois, Chairman.

H. Work, Colorado. P. W. Tomlinson, Delaware.
Frank Paschal, Texas. J. H. Hamilton, South Carolina.

COMMITTEE ON HYGIENE AND PUBLIC HEALTH.

W. N. Wishard, Indiana, Chairman.

R. M. Woodward, U. S. P. H. and M.-H. S. Charles J. Kipp, New Jersey.
John Champlin, Rhode Island.
J. E. Cannaday, West Virginia.

Report of the General Secretary.

READ AND REFERRED TO COMMITTEE.

To the Members of the House of Delegates of the American Medical Association:

Gentlemen:—I submit herewith my report for the past year.

The membership of the American Medical Association on the date of my last report, May 1, 1906, was 23,636. The discontinuances during the year were 2,135, of which 258 were from death, 1,005 resigned, 424 were dropped for non-payment of dues, 419 were dropped as not eligible under Section 1, Chapter 1, Book 1, of the By-Laws, and 29 were discontinued, reported "not found," or mail returned by the Postoffice Department. The comparatively large number of non-eligible members dropped is due to a systematic revision of the membership list which has been carried on during the past year. There have been added to the list 6,014 names, of which 4,322 were subscribers to THE JOURNAL previous to becoming members of the Association, while 1,692 were new members joining the Association direct. This gives a net gain for the year of 3,879. The membership on May 1, 1907, was 27,515.

OKLAHOMA STATE MEDICAL ASSOCIATION.

The amalgamation of the Oklahoma and Indian Territorial Associations was unofficially announced in the report for last year. Since that time the general secretary has been officially advised by the proper officers of the union of these two associations under the name of the Oklahoma State Medical Association.

COMMITTEES APPOINTED.

Since the last session the following committees were appointed by the President, in accordance with resolutions adopted at the Boston session:

1. Committee on Tropical Medicine—Ludvig Hektoen, Chicago, chairman; Maximilian Herzog, Chicago; George Dock, Ann Arbor, Mich.; L. F. Barker, Baltimore; Col. F. C. Gorgas, Panama.

2. Committee on Ophthalmia Neonatorum—F. P. Lewis, Buffalo, chairman; J. Clifton Edgar, New York City; F. F. Westbrook, Minneapolis.

ASSOCIATE MEMBERS.

In my report for 1906 I called attention to the advisability of amending Section 5, Chapter 3, Book 1 of the By-Laws, in order to make its meaning more definite and thus to avoid the misconstruction that occurs each year. As the section now stands, it is not clearly specified that it applies only to those who are not eligible to regular membership. Every year someone claims that the provisions of this section permit those who are eligible to full membership, but who do not care to avail themselves of it to acquire temporary membership. It is obvious that it would be unjust to active members to allow practicing physicians, eligible to regular membership, but not caring to assume its obligations, to become associate members and thus obtain special privileges. It is equally obvious that there are many men, pathologists, bacteriologists, etc., who are not medical graduates, or, if graduates, who are not licensed to practice medicine, yet who wish to enjoy the advantages of membership and whose cooperation and support some sections desire without having to go through the formality of election each year. I would therefore respectfully suggest the following amendments:

That a new section, to be Section 3, Chapter 3, Book 1 of the by-laws (page 8), read as follows:

Section 3.—ASSOCIATE MEMBERS.—Representative teachers, students of sciences allied to medicine, resident in the United States, and not eligible to regular membership, may become Associate Members of this Association on recommendation of the officers of a section and on election by the House of Delegates. Such members shall be designated as Associate Members.

The present Section 3 to become Section 4, and to be amended by the insertions of the words "and associate," following the word "pharmaceutical," making the section read as follows:

Section 4.—Privileges.—Dental, Pharmaceutical and Associate Members shall enjoy the same privileges as regular members, and shall be subject to the same conditions.

The present Section 4 to become Section 5, and to be amended by inserting the word "three" following "two" in the second line of the Section, making it read as follows:

Section 5.—Forfeiture of Membership.—Membership obtained under Sections 1, 2 and 3 of this Chapter may be declared forfeited by the House of Delegates for reasons considered sufficient by that body.

A new section, to be known as Section 6, to be inserted and to read as follows:

Section 6.—Invited Guests.—Representative teachers, students of sciences allied to medicine, and distinguished physicians of foreign countries may be invited by the general officers or by the officers of a section to attend the annual session and to take part in the scientific work. They shall be designated as Invited Guests; they shall hold their connection with this Association until the close of the annual session to which they are invited and shall be entitled to participate in the scientific and social functions of the Association.

Present Section 6 to become Section 7.

Present Section 7 to become Section 8.

ROLL CALL.

The committee on recording minutes, which reported at the 1906 session, recommended that the roll be called and that the attendance be made a matter of record at each meeting of the House of Delegates. This recommendation was adopted. I therefore recommend that Book 2, Chapter 5, Section 1 of the by-laws be amended by inserting "Roll Call" as the second item on the Order of Business of the House of Delegates, and that the succeeding numbers be changed accordingly.

REPORTS FROM STATE SECRETARIES.

The relations between the secretaries of the various constituent associations and the General Secretary's office are becoming each year more intimate. As the activities of the organization increase and as membership becomes more valuable, due to greater membership advantages offered, the necessity of an accurate system of registering members becomes more apparent. The reporting system inaugurated two years ago is becoming more and more valuable. During the past year regular reports were received from thirty-nine state secretaries. The reports received from the remaining secretaries, while not regular, were, with one exception, sufficiently so to cover all the membership transaction during the year.

COUNCILORS BULLETIN.

The Councilors Bulletin has been issued at intervals during the past year, and has contained much matter for the consideration of officers of county and state societies. The mailing list has been increased by the addition of the names of the presidents of county societies as well as the secretaries, which has given the Bulletin a circulation of nearly 5,000.

BIOGRAPHICAL CARD INDEX.

There are now on hand in the directory department over 60,000 personal biographical reports from individual members of the profession, obtained primarily for the Directory. They are being used for compiling the biographical card index referred to in previous reports. The work of transferring the biographic data from the blanks to a permanent card and of arranging and indexing these cards is now being carried on.

PORTO RICO ASSOCIATION.

As mentioned in the last two reports, correspondence has been carried on with physicians of Porto Rico, looking toward the organization of a constituent association on that island. Nothing definite, however, has come to my notice as yet.

I can not close this report without testifying to the increasing interest in organization matters which has characterized the profession throughout the entire country and to the better feeling existing in the profession. More attention than ever before is being paid to questions involving the duties, privileges and rights of physicians as members of society, as well as the possibilities of organization, so far as increased benefit to the public is concerned. In many of our local societies the work of the organized profession has been greatly extended, and the influence of the society for good, both to the public and the profession, has been vastly increased. The organized profession owes much to those members, each year increasing in number, who are unselfishly devoting much time and energy to promoting the highest and best interests of the profession and of the public.

Respectfully submitted.

GEORGE H. SIMMONS, *General Secretary.*

Dr. Alexander R. Craig, Pennsylvania, moved that the report be received and referred to the Reference Committee on Reports of Officers, with the exception of that part of it recommending an amendment to Book 2, Chapter 5, Section 1 of the By-laws, that this be referred to the Reference Committee on Amendments to the Constitution and By-laws, with the understanding that this amendment had been properly brought before the House at this session.

This motion was seconded, carried, and the report was so referred.

Report of the Board of Trustees.

READ AND REFERRED TO COMMITTEE

The report of the Board of Trustees was read by the Chairman, Dr. T. J. Happel, Tennessee.

To the Officers, Members, and House of Delegates of the American Medical Association:

Complying with the requirements of the Constitution and By-Laws of the American Medical Association, we present herewith our annual report, in which we have endeavored to give to you, in a plain, practical, businesslike manner, the results of the year's work in the office of THE JOURNAL of the Association, and such other matters as we think may interest you.

Your attention is invited to the fact that the Investors Audit Company of Chicago has presented the financial status in such a way that any one can easily understand the different exhibits.

To the end that you may have as complete a financial résumé as possible, we present this report in full, as follows:

THE INVESTORS AUDIT COMPANY.

CHICAGO, JAN. 29, 1907.

To the Board of Trustees of the American Medical Association, Chicago, Ill.

Gentlemen:

In accordance with your instructions, we have examined the books and vouchers of the American Medical Association for the year ended December 31, 1906, and hand you herewith the following statements:

- Comparative Balance Sheet as at December 31, 1905 and 1906 (Exhibit A).
- Revenue Account for the year ended December 31, 1906 (Exhibit B).
- Disposition of Net Revenue for the year ended December 31, 1906 (Exhibit C).
- Net Investment in Directory to date (Exhibit D).
- Inventory of Materials and Supplies (Exhibit E).
- Details of Bond Account (Exhibit F).
- Summary of Publication Expenses (Exhibit G).
- Summary of Organization Expenses (Exhibit H).
- Summary of Association Expenses (Exhibit I).
- Summary of Medical Legislation (Exhibit J).
- Summary of Medical Education (Exhibit K).
- Summary of Depreciation (Exhibit L).

We would call your attention to the fact that while the accounts show that there has been a considerable increase in the net assets of the Association during the year under audit large amounts have been invested in additional machinery and directory equipment. Compared with the previous year the cash on hand has been reduced by $6,861.32, and the accounts payable increased by $12,169.88.

In the course of the audit we have checked the cash received from the different sources and traced it into the bank. We examined vouchers for all cash disbursements, with the exception of a few issued during the latter part of the year which had not been returned by the bank. These will be examined by us later, and if any remain missing we will report upon the same to you. In checking these vouchers for disbursements we have been careful to see that invoices or other original evidence of the nature of the disbursement were attached to the receipts. We also noted that the vouchers had been approved by the proper officials, that the invoices had been checked both for receipt of goods, prices and extensions and that distribution of the expenditure to the proper account on the books had been made.

We verified the cash in bank by means of statements furnished by the Bankers, and the cash on hand by actual count.

The securities in possession of the Treasurer were examined by us and found to be in order.

We found the bookkeeping and office work to be well and accurately done and the condition of the same to reflect considerable credit on the office force, especially in view of the large increase in the total business done during the year.

We shall be glad to furnish you with any further information in our possession that you may require. Yours faithfully,

THE INVESTORS AUDIT COMPANY,
By E. M. MILLS, Manager.

EXHIBIT A.

AMERICAN MEDICAL ASSOCIATION COMPARATIVE BALANCE SHEET, DEC. 31, 1905 AND 1906.

ASSETS.

Dec. 31, 1905.		Dec. 31, 1906.
$114,323.61	Real estate and buildings	$111,781.91
33,422.45	Machinery	45,531.08
5,341.29	Furniture and fixtures	6,862.43
1,163.11	Library	1,175.16
10,868.39	Net investment in Directory to date (see Exhibit D)	43,820.66
7,167.57	Inventory of materials and supplies (see Exhibit E)	14,336.59
40,199.38	Bonds at cost (see Exhibit F)	40,199.38
60.00	Bills receivable:	
15,052.28	Accounts receivable:	
	Chicago Postmaster—deposit. $ 455.00	
	Advertising 12,905.90	
	Reprints 757.20	
	Sundry 719.07	14,837.17
19,884.83	Cash:	
	Treasurer's account $11,697.38	
	Office account 1,276.13	
	Cashier's account 50.00	13,023.51
$247,482.91		$291,567.89

LIABILITIES.

$ 9,736.12	Accounts payable:		
	Sundries	$ 6,706.00	
	Due on machinery contracts (estimated)	15,200.00	$21,906.00
237,746.79	Balance being excess of assets over liabilities		269,661.89
$247,482.91			$291,567.89

EXHIBIT B.

AMERICAN MEDICAL ASSOCIATION REVENUE ACCOUNT FOR THE YEAR ENDED DEC. 31, 1906.

INCOME:		
Advertising	$ 98,458.85	
Subscriptions collected	87,694.97	
Membership dues collected	103,076.10	
Jobbing	18,707.22	
Reprints	5,417.75	
Buttons	1,519.89	
Books	3,008.56	
Rents of Association properties	3,240.00	
Sale of paper; boxes, etc.	1,639.76	
Interest on bonds	1,560.00	
Interest on bank balances	977.25	$325,300.35
DEDUCT:		
Publication expenses (see Exhibit G)	$246,088.43	
Organization expenses (see Exhibit H)	7,290.83	
Association expenses (see Exhibit I)	12,629.54	
Medical legislation (see Exhibit J)	1,663.74	
Medical education (see Exhibit K)	3,520.61	
Depreciation (see Exhibit L)	6,904.34	
Pharmacy and chemistry	4,053.08	
Books	3,031.12	
Buttons	1,235.92	
Insurance and taxes	1,841.12	
Interest and discount	1,106.71	
Exchange	752.27	
Building maintenance	330.11	
House expense	433.43	
Commissions for securing new members, etc.	626.70	
Bad debts, less recoveries	449.80	
Collections	1,427.50	293,385.25
Net revenue for the year ended Dec. 31, 1906		$31,915.10

EXHIBIT C.

AMERICAN MEDICAL ASSOCIATION. DISPOSITION OF NET REVENUE FOR THE YEAR ENDED DEC. 31, 1906.

INCREASE IN ASSETS:		
Furniture and fixtures	$ 1,521.14	
Library	12.05	
Inventories	7,169.02	
Net investment in Directory	32,952.27	
Machinery	12,108.63	$53,763.11
DECREASE IN ASSETS:		
Real estate and buildings	$2,541.70	
Bills receivable	60.00	
Accounts receivable	215.81	
Cash	6,861.32	
	$ 9,678.13	
INCREASE IN LIABILITIES:		
Accounts payable	$12,169.88	21,848.01
Net revenue for the year ended Dec. 31, 1906, as per account annexed		$31,915.10

EXHIBIT D.

AMERICAN MEDICAL ASSOCIATION. NET INVESTMENT IN DIRECTORY AS AT DEC. 31, 1906.

Directory equipment, etc.	$ 6,124.75
Directory sales commissions	735.50
Directory advertising commissions	109.38
Express	67.55
Postage	4,254.13
Correspondents, information, etc.	7,983.81
Pay roll	23,674.96
Jobbing	1,651.00
Advertising (In JOURNAL)	385.00
Paper	1,391.86
Supplies	129.49

Stationery	412.77	
Insurance	201.50	
Miscellaneous	320.13	$47.441.83
LESS:		
Advance Directory sales	$3,546.17	
Advance Directory advertisements	75.00	$3,621.17
		$43,820.66

EXHIBIT E.

AMERICAN MEDICAL ASSOCIATION. SUMMARY OF INVENTORY AS AT DEC. 31, 1906.

Paper stock	$7,025.80
Metal	4,260.68
Type	2,509.26
Buttons	321.60
Ink	163.00
Coal	56.25
	$14,336.59

EXHIBIT F.

AMERICAN MEDICAL ASSOCIATION. DETAILS OF BOND ACCOUNT AS AT DEC. 31, 1906.

	Par value.	Cost.
5 Atchison, Topeka and Santa Fe Ry. Co. 4 per cent. 100-year gold bonds	$ 5,000.00	$ 4,988.75
5 Erie R. R. Co. 4 per cent. gold bonds	5,000.00	4,932.50
5 Baltimore & Ohio R. R. Co. first mortgage 4 per cent. bonds	5,000.00	5,032.50
5 Reading Company general mortgage 4 per cent. bonds	5,000.00	4,870.00
5 Union Pacific R. R. Co. first mortgage 4 per cent. bonds	5,000.00	5,207.50
14 City of Chicago 4 per cent. school bonds.	14,000.00	15,168.13
	$39,000.00	$40,199.38

EXHIBIT G.

AMERICAN MEDICAL ASSOCIATION SUMMARY OF PUBLICATION EXPENSES AS AT DEC. 31, 1906.

Paper		$72,776.71
Type, metal and electros		3,290.45
Ink		3,500.34
Salaries		31,500.04
Pay roll		65,078.67
News reporting and editorials		8,949.84
Binding		651.00
Machinery repairs and renewals		2,098.42
Advertising and subscription commissions		14,812.56
Postage:		
First class	$ 8,228.73	
Second class	17,066.62	25,295.35
Power		2,526.26
Light		2,005.02
Fuel		629.81
Miscellaneous expense		7,172.82
Factory supplies		1,656.04
Office jobbing		2,421.40
Express and cartage		1,723.70
		$246,088.43

EXHIBIT H.

AMERICAN MEDICAL ASSOCIATION. SUMMARY OF ORGANIZATION ACCOUNT AS AT DEC. 31, 1906.

Dr. J. N. McCormack:		
Salary for year 1906	$4,999.92	
Traveling expenses, Sept. 4, 1905, to June 1, 1906	1,311.50	
Stenographic services and sundry office expenses	174.00	$6,485.42
Agents' expenses		551.08
Jobbing		246.85
Miscellaneous		7.48
		$7,290.83

EXHIBIT I.

AMERICAN MEDICAL ASSOCIATION. SUMMARY OF ASSOCIATION ACCOUNT AS AT DEC. 31, 1906.

Salary Assistant to the General Secretary	$1,083.31
California Physicians' Relief Fund	3,000.00
Trustees' meetings	2,782.43
Scientific research	500.00
Reporting, transcribing, etc.	1,811.87
Sections' secretaries' expense	600.00
Boston meeting	1,054.15
Jobbing	485.60
Binding	116.89
Postage	120.47
Scientific exhibit	483.28
Freight, express and cartage	130.54
Badges and buttons	81.00
Premium on Treasurer's bond	75.00
Salary, Treasurer	200.00
Miscellaneous	105.00
	$12,629.54

EXHIBIT J.

AMERICAN MEDICAL ASSOCIATION. SUMMARY OF MEDICAL LEGISLATION AS AT DEC. 31, 1906.

Dr. Chas. A. L. Reed:		
Sundry office expenses	$1,272.27	
Expenses Washington meeting	141.50	$1,413.77
Dr. W. L. Rodman:		
Expenses Washington meeting		30.85
Jobbing		188.80
Supplies		18.05
Miscellaneous		12.27
		$1,663.74

EXHIBIT K.

AMERICAN MEDICAL ASSOCIATION. SUMMARY OF MEDICAL EDUCATION AS AT DEC. 31, 1906.

Salaries, secretary and clerks	$2,155.35
Meetings	316.54
Reporting proceedings of Council on Medical Education	73.40
Postage and supplies	343.00
Jobbing	253.60
Traveling	43.77
Inspection medical schools	309.70
Miscellaneous	25.25
	$3,520.61

EXHIBIT L.

AMERICAN MEDICAL ASSOCIATION. SUMMARY OF DEPRECIATION AS AT DEC. 31, 1906.

Building	$2,836.30
Machinery	3,370.12
Furniture and fixtures	697.92
	$6,904.34

TREASURER'S REPORT.

REPORT OF THE TREASURER OF THE AMERICAN MEDICAL ASSOCIATION FOR THE YEAR ENDING DEC. 31, 1906.

RECEIPTS.

1906.	
Jan. 1—Cash balance in bank	$ 4,408.86
June 1—Interest at 3 per cent. for 9 months on $15,000. Certificate of deposit Sept. 1, 1905, to June 1, 1906	337.50
June 1—Cash received from editor of JOURNAL	10,000.00
Dec. 10—Interest at 3 per cent. for 6 months on $15,000. Certificate of deposit June 1, to Dec. 1, 1906	225.00
1905.	
Interest coupons on 39 $1,000 bonds, 4 per cent	1,560.00
Interest 2 per cent. on daily cash balance (on $5,000 or more) for months of June to December inclusive, 1906	166.02
1906.	
Dec. 10—Deposit in checking account from certificate of deposit in First Trust and Savings Bank	15,000.00
	$31,697.38

DISBURSEMENTS.

1906.	
Nov. 20—Cash paid editor of JOURNAL on order of Trustees	$10,000.00
Dec. 10—Cash paid editor of JOURNAL on order of Trustees	10,000.00
Dec. 31—Cash balance in bank	11,697.38
	$31,697.38

PROPERTY OF AMERICAN MEDICAL ASSOCIATION IN HANDS OF TREASURER, JAN. 1, 1907.

	Cost.	Par value.	
Cash in checking account First National Bank Chicago			$11,697.38
5/1000 bonds U. P. Ry., 1st 4's	$5,207.50	$5,000.00	
5/1000 bonds Erie Ry. Co., 1st 4's	4,932.50	5,000.00	
5/1000 bonds Rd. Gen., 1st 4's	4,870.00	5,000.00	
14/1000 Chicago City, 4's	15,163.13	14,000.00	
5/1000 bonds A. T. & S. F., 4's	4,988.75	5,000.00	
5/1000 bonds B. & O., 1st 4's	5,032.50	5,000.00	
	$40,194.38	$39,000.00	39,000.00
			$50,697.38

Very respectfully submitted,

FRANK BILLINGS, *Treasurer.*

SUBSCRIPTION DEPARTMENT.

The regular weekly issue of THE JOURNAL of the American Medical Association, from Jan. 6, 1906, to Dec. 29, 1906, inclusive, 52 issues, was as follows:

CIRCULATION.

Jan. 6	42,641		July 7	46,706	
Jan. 13	42,885		July 14	46,060	
Jan. 20	42,982		July 21	46,515	
Jan. 27	42,849		July 28	46,283	
		171,357			185,564
Feb. 3	42,882		Aug. 4	46,489	
Feb. 10	43,381		Aug. 11	46,579	
Feb. 17	43,321		Aug. 18	46,634	
Feb. 24	43,204		Aug. 25	48,267	
		172,788			187,969
March 3	43,554		Sept. 1	47,049	
March 10	43,500		Sept. 8	46,936	
March 17	43,183		Sept. 15	50,564	
March 24	43,025		Sept. 22	49,144	
March 31	43,266		Sept. 29	48,815	
		216,528			242,508
April 7	43,504		Oct. 6	48,198	
April 14	44,017		Oct. 13	51,152	
April 21	45,498		Oct. 20	51,102	
April 28	44,150		Oct. 27	48,327	
		177,169			198,779
May 5	51,371		Nov. 3	49,105	
May 12	44,115		Nov. 10	50,305	
May 19	44,957		Nov. 17	51,962	
May 26	45,120		Nov. 24	48,978	
		185,563			200,750
June 2	45,811		Dec. 1	51,763	
June 9	45,474		Dec. 8	49,227	
June 16	46,179		Dec. 15	49,032	
June 23	46,179		Dec. 22	49,136	
June 30	46,325		Dec. 29	48,783	
		229,961			247,941
Grand Total		2,416,877	Weekly Average		46,479

The total number of copies issued during 1906 was 2,416,877; the total number of copies issued during 1905 was 1,976,316, indicating an increase of 440,561, or, approximately, 22¼ per cent., as compared with an increase of 1905 over 1904 of 257,914, or about 15 per cent.

The following is an approximate count of the mailing list of members and subscribers by states on Jan. 1, 1907. It also indicates the loss or gain in each state during 1906. Copies to the United States Army, United States Navy, Marine-Hospital Service, etc., omitted:

State.	Members.	Subscribers.	Totals.	Gain for Year.	Loss for Year.
Alabama	337	257	594	167	...
Arkansas	347	244	591	105	...
Arizona	60	42	102	12	...
Alaska	1	4	5	1	...
California	991	488	1479	16	...
Colorado	396	231	627	11	...
Connecticut	390	199	589	56	...
Delaware	59	21	80	29	...
Dist. of Columbia	246	176	422	5	...
Florida	131	85	216	...	48
Georgia	314	270	584	117	...
Idaho	88	41	129	4	...
Illinois	2,168	2,109	4,277	466	...
Indiana	878	671	1,549	32	...
Indian Territory	84	183	267	101	...
Iowa	839	815	1,654	267	...
Kansas	506	612	1,118	402	...
Kentucky	591	469	1,060	166	...
Louisiana	386	316	702	99	...
Maine	250	103	353	66	...
Maryland	442	352	794	53	...
Massachusetts	1,720	616	2,336	671	...
Michigan	842	779	1,621	173	...
Minnesota	668	352	1,020	116	...
Missouri	858	1,528	2,386	929	...
Mississippi	273	240	513	55	...
Montana	110	66	176	5	...
Nebraska	402	352	754	142	...
Nevada	38	22	60	11	...
New Hampshire	232	49	281	61	...
New Jersey	575	310	885	111	...
New Mexico	68	58	126	22	...
New York	2,141	1,761	3,902	1,089	...
North Carolina	199	286	485	228	...
North Dakota	149	163	312	63	...
Ohio	1,669	1,104	2,773	422	...
Oklahoma	158	118	276	69	...
Oregon	234	106	340	...	18
Pennsylvania	2,341	1,119	3,460	304	...
Rhode Island	216	55	271	86	...
South Carolina	196	212	408	145	...
South Dakota	160	135	295	37	...
Tennessee	458	358	816	206	...
Texas	893	518	1,411	241	...
Utah	89	62	151	10	...
Vermont	176	41	217	28	...
Virginia	379	271	650	163	...
Washington	315	199	514	...	18
West Virginia	287	211	498	80	...
Wisconsin	740	489	1,229	27	...
Wyoming	39	33	72	10	...
Canada	9	214	223	62	...
Cuba	20	9	29	20	...
Mexico	18	45	63	17	...
Porto Rico	3	17	20	2	...
Panama	6	11	17	5	...
Hawaii	14	13	27	...	1
Shanghai	2	5	7	7	...
Philippine Islands	21	22	43	...	1

The following figures indicate the count of the mailing list Jan. 1, 1907, compared with that of Jan. 1, 1905, and 1906:

	Jan. 1, 1905.	Jan. 1, 1906.	Jan. 1. 1907.
Copies to members	17,570	20,826	26,255
Copies to subscribers	15,698	17,669	20,166
Copies to exchanges	178	216	293
Copies to advertisers	248	310	214
Complimentary (medical colleges, libraries, agents, etc.)	188	240	242
	33,882	39,261	47,170

This shows an increase at Jan. 1, 1907, over Jan. 1, 1906, of 7,909 names.

PERCENTAGE OF PHYSICIANS RECEIVING THE JOURNAL.

This table gives the number of physicians (based on the American Medical Directory, first edition) in the United States, and the number receiving THE JOURNAL, and the percentage in each state. Copies to physicians in the United States Army, United States Navy, Marine-Hospital Service, etc., omitted:

State.	Physicians in State.	Number receiving Journal.	Approximate per cent.
Alabama	2,117	594	28.0
Arizona	203	102	50.2
Arkansas	2,322	591	25.4
Alaska	57	5	8.7
California	3,990	1,479	37.0
Colorado	1,550	627	40.4
Connecticut	1,332	589	44.2
Delaware	222	80	36.0
Dist. of Columbia	1,100	422	38.0
Florida	619	216	34.8
Georgia	2,778	584	21.0
Idaho	259	129	49.7
Illinois	9,419	4,277	45.4
Indian Territory	964	267	27.6
Indiana	4,908	1,549	31.5
Iowa	3,517	1,654	47.0
Kansas	2,321	1,118	48.1
Kentucky	3,761	1,060	28.1
Louisiana	1,551	702	45.9
Maine	1,116	353	31.6
Maryland	1,810	794	43.8
Massachusetts	5,372	2,336	43.2
Michigan	4,066	1,621	39.8
Minnesota	1,946	1,020	52.4
Mississippi	1,760	513	29.1
Missouri	5,956	2,386	40.0
Montana	335	176	52.5
Nebraska	1,668	754	45.2
New Hampshire	646	281	43.4
New Jersey	2,332	885	37.9
New Mexico	221	126	57.0
New York	11,982	3,902	32.5
Nevada	138	60	43.4
North Carolina	1,453	485	33.3
North Dakota	451	312	69.1
Ohio	7,710	2,773	35.9
Oklahoma	905	276	30.4
Oregon	696	340	48.8
Pennsylvania	9,957	3,460	34.7
Rhode Island	727	271	37.2
South Carolina	1,023	408	39.8
South Dakota	545	295	54.1
Tennessee	2,980	816	27.3
Texas	4,825	1,411	29.2
Utah	304	151	49.6
Vermont	646	217	33.5
Virginia	1,945	650	33.4
Washington	1,023	514	50.2
West Virginia	1,409	498	35.3
Wisconsin	2,430	1,229	50.5
Wyoming	174	72	41.3

The following table shows the number of members and of subscribers for each year, commencing with 1899:

	Members.	Subscribers.
Jan. 1, 1899	7,997	2,453
Jan. 1, 1900	8,445	4,633
Jan. 1, 1901	9,841	8,339
Jan. 1, 1902	11,107	10,795
Jan. 1, 1903	12,553	12,378
Jan. 1, 1904	13,899	14,674
Jan. 1, 1905	17,570	15,698
Jan. 1, 1906	20,826	17,669
Jan. 1, 1907	26,255	20,166

It will be noticed from the above that the membership increased 5,429, but most of these were in the "subscribers"

column last year and were transferred to membership during 1906.

A glance at the table, "Percentage of Physicians Receiving THE JOURNAL," reveals that in most of the states there has been an increase in this percentage. Alabama goes from 20.1 to 28 per cent.; Arkansas from 20.4 to 25.4 per cent.; District of Columbia from 40.4 to 58 per cent.; Georgia from 16.8 to 21 per cent.; Louisiana from 41.2 to 45.9 per cent.; North Carolina from 15.9 to 33.5 per cent.; Texas from 23.5 to 29.2; and Tennessee from 17.7 to 27.5 per cent. But few of the states show a percentage of decrease, and in no case is this large. Canada shows a gain of 62 subscribers; Cuba, 20; Mexico, 17; Philippine Islands, a loss of 1; and Shanghai, China, is entered on the list with 7.

The greatest loss in any state is shown by Florida, where the net loss is 48. New York leads with a net gain of 1,089, and yet only 32.5 per cent. of her physicians take THE JOURNAL.

Missouri comes next with a gain of 929 who receive THE JOURNAL. One reading the table can compare further if desired.

The following exhibit is simply a grouping together of income from various sources so that you may be able to compare the two years, 1906 and 1905:

	1906.	1905.	Gain.
Advertising	$ 98,458.85	$95,600.36	$ 2,858.49
Membership dues	103,076.10	83,409.15	19,666.95
Subscription	87,694.97	64,242.46	23,452.51
Jobbing	18,707.22	9,608.40	9,098.82
Reprints	5,417.75	5,916.91	Loss 499.16
Rents	3,240.00	3,447.04	Loss 207.04
Interest on bonds	1,560.00	1,560.00	000.00
Interest on daily balances.	977.25	524.63	452.62
Inventory	14,336.59	7,167.57	7,169.02

Had there been no increase in expenses, the above table would be extremely pleasant reading, but of course with the growth of THE JOURNAL, expenses increase also. The increase in receipts from members is nearly double that shown in 1905, and in subscriptions the increase is more than six times that of 1905 over 1904.

The inventory of stock on hand (See Exhibit "E," Auditor's Report), is almost exactly double that of 1905.

Further comment might be made in this part of the report, but the progress of the work will be shown more plainly under the different subdivisions.

ADVERTISING DEPARTMENT.

The amount received from advertising during the year was $98,458.85. In 1905 the amount received from this source was $95,600.36, showing a net gain for 1906 of $2,858.49—being about 3 per cent. over the preceding year. It must be remembered, however, that each year much advertising matter is refused because of non-compliance with the requirements of the Council on Pharmacy and Chemistry—at least $25,000 worth of such advertising having been refused during 1906. As the circulation of THE JOURNAL increases, the rate charged for space in its pages is proportionately increased.

A careful inspection of the advertising pages of THE JOURNAL, and a comparison with the same pages of five years ago, will give a much clearer idea of the changes that have been made along these lines.

During the past year all proprietary medicines offered for advertising, which had not been officially acted on by the full Council on Pharmacy and Chemistry, were passed on by a subcommittee of the Council on advertising. Hereafter, however, all proprietary medicines will have to be approved by the full Council before they can be considered acceptable for advertising in THE JOURNAL. This rule has been adopted because the ground, as it relates to proprietary medicines advertised to the profession, has been thoroughly covered by the Council, and consequently there is no excuse for any article now offered for advertising which has not been submitted to the Council.

SUBSCRIPTIONS.

The amount collected for subscriptions during 1906 was $87,694.97; for 1905, subscription collections amounted to $64,242.46, showing an increase of $23,452.51, or about 36½ per cent. In the foregoing pages it is indicated that the circulation of THE JOURNAL was augmented by 7,909 names. During that period at least 10,000 names were actually placed on the mailing list. The difference between these two figures is represented in the discontinuance of THE JOURNAL for various reasons, such as members dropped because ineligible, members and subscribers dropped for non-payment, resignations, deaths, and for other causes. It will therefore be noted that it almost necessitates the securing of two names before we show an actual increase of one name.

Your Board can see no reason why the number of members should not still materially increase, with a corresponding reduction in the number of subscribers. If the matter were fully explained in the county medical societies, there would be but few members of those societies who would take THE JOURNAL without becoming *members* of the Association. All that is necessary is to fill out, when remitting the $5, an application blank, certified to by the president and secretary of his county medical society, showing that he is a member in good standing, and that his fee paid is for membership from January 1 of the year in which it is forwarded to December 31 of that same year.

Receipts and disbursements for house betterments have been as follows:

REAL ESTATE, BUILDING, ETC.

	Receipts.	Disbursements
241 Indiana Street	$1,560.00	$115.81
95 Dearborn Avenue	720.00	74.18
97 and 99 Dearborn Avenue	960.00	243.44
One-half taxes, lots 7 and 8	.....	250.92
One-half taxes, lot 6	.....	74.98
Totals	$3,240.00	$759.33
	759.33	
Net gain	$2,480.67	

The above property occupies three-fifths of the ground purchased by the Association for building purposes. Figuring on the proportionate basis, this property cost $34,558.26; the net gain is $2,480.67, or about 7.2 per cent. To these buildings are charged one-half of the real estate taxes of the entire Association property. In addition to this, the Association uses for storage purposes the basement of the building located at No. 99 Dearborn Avenue.

During the past year the houses have been looked after by the office force, thus saving agents' expenses and commissions. Little repair expense has been necessary, the only item of importance being a new furnace in the house known as No. 99 Dearborn Ave.

The same tenants are occupying the various houses. One rents two houses, viz., 97 and 99 Dearborn Ave., and another rents the double house on Indiana Street; consequently we have only three tenants for the five houses.

Owing to the crowded condition of the building used for THE JOURNAL office, resulting from the Directory work, some changes which were to have been made in the arrangement of rooms for the chemical laboratory work and for other purposes had to be delayed till the Directory was out, but they have now been made.

PAPER STOCK.

During the past year there has been a considerable increase in the price of pulp and everything else that goes into the making of paper, and, naturally, paper has increased in price also. We succeeded, however, in getting a renewal of our contract at what we think are very advantageous terms, being only a slight advance on the price paid last year.

The following table gives the amount of paper stock used in reams and tons, and is merely carrying on the statement made to you in previous reports:

	Reams.	Tons.
1898	3,395	157
1899	4,832	230
1900	6,747	303.5
1901	9,052	407
1902	10,230	469 1/3
1903	12,368	586 11/20
1904	14,399	648
1905	17,783	788
1906	21,729	930.07

The above figures do not include the paper used for wrappers in mailing THE JOURNAL, which of itself amounted to nearly fifteen tons for 1906.

You will note that we are now using nearly six times as much paper as was used in 1898.

INCREASED EXPENSES.

We submit below the various tables illustrating the gradual increase in expenses. This is merely a continuation of the tables of previous years:

PAY ROLL AND SALARY.

1899	$31,448.69
1900	37,359.49
1901	40,416.01
1902	46,316.65
1903	57,067.34
1904	64,471.26
1905	78,874.79
1906	96,578.71

PAPER STOCK.

1900	$25,598.00
1901	29,835.00
1902	35,675.06
1903	43,966.57
1904	51,190.05
1905	57,526.69
1906	65,381.17

POSTAGE ON JOURNAL.

1899	$ 3,905.65
1900	5,616.06
1901	7,591.37
1902	8,595.63
1903	9,828.41
1904	11,773.44
1905	14,360.28
1906	17,066.62

DIRECTORY.

In order that you may fully understand the matter of the Directory, we submit to you *verbatim* the report made by the Editor and General Manager to the Board of Trustees at their annual meeting in Chicago on Feb. 1, 1906. To eliminate any part of it would not do you or the Editor and General Manager justice, because few of you have any adequate idea of the vast amount of work connected with the getting out of the first edition of this work, and because the leaving out of any part of it would leave the report to that extent incomplete.

"As previously reported in detail, the work on the Directory was begun in the first week of September, 1905. The first work undertaken was: (1) that of obtaining, from the 70 state licensing boards, lists of names of physicians licensed by them; (2) organization of the staff of correspondents, which consisted of one in each of the 2,830 counties, and one in each town having ten or more physicians, making a staff of approximately 5,000 correspondents; (3) preparation of lists of physicians to be sent to each correspondent for revision and correction; these lists were based on matter in the Standard Directory, to which other information was added; (4) the correction and return of these lists and the compilation of the index of the legally qualified physicians.

"An important feature of the work was the obtaining of a list of graduates from the various colleges. A more or less complete list of medical college graduates up to 1902 was obtained from the Standard Directory matter. This list was supplemented and brought up to date by obtaining from practically every college in the country a list of the graduates for 1902, 1903, 1904, 1905 and 1906.

"During the period from September, 1905, to April, 1906, the work was carried on of obtaining information from physicians direct by means of personal letters. Approximately 90,000 letters, each containing personal biographical blanks, were sent out. Besides these blanks that were sent out directly to physicians, similar blanks were inserted in the advertising pages of THE JOURNAL on several occasions. From these two sources about 65,000 personal biographical reports have been received.

"The copy for the Directory was written from the reports sent in by the correspondents. This copy was then checked with the personal information blanks, then with the list of graduates from medical colleges, then with the reports from the secretaries of the state societies, then with the list of members of the American Medical Association. Finally, and most important of all, this completed copy was compared, name by name, with the list of legally qualified physicians obtained from the various state licensing boards, and the date of license inserted as an evidence of qualification. All names not found on the state board list were referred to the Secretary of the State Board and, unless O K'd by him, were stricken off of the proof. As this was the first time that information from all of these sources had ever been carefully and systematically compared, a large number of discrepancies were found. Names intended for the same individual were spelled differently on different records; christian names and initials were reported differently for the same individual; the same physician would be reported on two different lists as a graduate of two different colleges, or as having graduated in two different years; many physicians, among them members of county and state societies, and even of the American Medical Association, were not reported as licensed.

"To correct these errors as far as possible, letters were sent (1) to all physicians reported as practicing but not reported as licensed; (2) to all physicians reported as licensed but not reported as graduates of any medical college; (3) to all physicians whose names appeared as members of the American Medical Association, but who were not reported as members of either their county or state society, and (4) a special blank to physicians who were reported as practicing, but concerning whom we had no adequate information.

"Composition on the Directory was begun on March 1, 1906, and as fast as a state was completed, revised and corrected a complete proof of the state by counties was taken and sent to each correspondent according to the territory he covered. A proof of the entire state was sent to the secretary of the state society and also to the secretary of the licensing board. The work of compilation, writing copy, composition and correction was carried on simultaneously, taking the states in alphabetical order. As soon as the list of physicians by states was in pages the alphabetical portion of the Directory was compiled.

"It is a pleasure to testify to the universal spirit of cooperation and helpfulness which has characterized the profession in this important work. The secretaries of all the state licensing boards have cheerfully and willingly complied with all requests for assistance, etc. The secretaries of the state societies, with one exception, have shown an equally cheerful spirit of cooperation.

"With the first edition of the Directory now completed, the work before us is as follows:

"1. To keep up to date the records regarding the licensed physicians in every state. This will be comparatively easy, since we are obtaining from all the licensing boards, on blanks furnished by us, a list of those who are licensed at each examination, which names are added to the list of licensed physicians in the state. Thus we shall have an official up-to-date list of the physicians who are licensed in every state alphabetically arranged.

"2. We secure each year from every medical college a list of those graduated from them. Thus we shall have, dating from 1902, a complete list of the graduates from every medical college in the United States, and a fairly complete list of the graduates of the majority of the medical colleges previous to 1902. Steps will be taken to verify graduations previous to that date, so far as possible.

"3. The completion of the biographical card index of the physicians of the United States. As has been repeatedly emphasized, this index is not only the basis of the Directory, but is of much greater importance, since it contains complete biographical data regarding each individual, much of which can not appear in the Directory on account of lack of space. As stated above, we have now on file in the Directory Department about 65,000 personal information blanks. Efforts will be made to obtain personal information from those physicians who have not already furnished it.

"As shown by the Auditor's report, the total expenditure for the Directory up to Jan. 1, 1907, was $47,441.83. Of this amount, $6,035.50 was paid for the Standard Directory. The amount expended on the Directory for other purposes since July 1, 1905, is, therefore, $41,406.33. This entire amount should not be charged to the present edition, since a portion of this expenditure was for fundamental information and material which will be used for all succeeding editions, and should consequently be regarded as an investment. For instance, the cost of obtaining the list of legally qualified practi-

tioners for the various states, the expense incurred in securing the 65,000 personal information blanks now on file, as well as the expense of obtaining the necessary college information, are all expenses which should be borne by succeeding editions, as well as by the first. But as it is impossible to estimate exactly what proportion of corrections, revisions and additions subsequent editions will require, the amounts expended have been charged as though used entirely for the first edition.

"To offset the charge of $41,406.33, there are at present the following assets: (1) 7,300 advance orders for the Directory, which at $5.00 each gives a total of $36,500; (2) as 8,500 copies of the Directory were printed, there are on hand 1,200 extra copies; (3) advertising contracts for the first edition to the amount of $7,400, giving a total of cash assets of $43,900. In this connection it should be remembered that unusual care has been exercised in admitting advertisements to the Directory. Consequently the receipts from this source will be infinitesimal compared with what would have been the case had we accepted the class of advertisements inserted in other directories. It should also be borne in mind that our advertising pages are entirely separate from the reading pages, no head lines, advertising foot notes nor marginal advertisements having been allowed on the Directory pages. (4) As the entire 1,500 pages of the Directory were stereotyped, the type was not used for printing, but has been properly labeled and put away in pages for use in subsequent editions. The value of the metal in the 1,500 pages is about $1,600. Other Directory property will be inventoried and credited to the Directory as soon as the work on the first edition is completed.

"The enormous amount of work in the way of verification of names, college and year of graduation, state licenses, society membership, etc., will not have to be repeated. In this connection, it is worthy of emphasis that one of the greatest expenses has been in preparing copy for the printer, since every item connected with each name had to be written into the copy. This expense will not have to be incurred in future editions.

"A considerable amount of expense remains to be added to the sum total as given above, so that we may estimate that there will be a probable apparent loss on the first edition of between $10,000 and $15,000."

PROFITS.

As stated in previous reports, the expenses of the Association vary from year to year, and consequently it is only a good business proposition at least to estimate each year what THE JOURNAL *makes*, as well as what is received from other sources. The Auditor's report shows that the net gain to the Association was $31,915.10, but the Association expenses for the past year were $29,157.80. Now, if the Association expenses were eliminated, the net gain would be $61,072.90. The Association, however, should have credit for $2,537.25 for interest and $2,806.57 for rents, making a total of $5,343.82, which amount deducted from $61,072.90 leaves $55,729.08 as the profits from THE JOURNAL. Or, estimated as follows:

Association net profits	$31,915.10	
Association expenses	29,157.80	
		$61,072.90
Interest	$2,537.25	
Rents	2,806.57	
		5,343.82
Journal profit		$55,729.08

MACHINERY.

The new printing press, for which an appropriation of $20,000 was made, has not yet been installed—owing to some trouble with the folding attachment—but the appropriation is still available and you will note that in Exhibit A, the auditor's report, it is charged as one of the liabilities due on machinery contracts.

A new paper cutter has been put in the office, costing, in exchange for the old one, a net excess of $525.00 cash.

The gathering machine—ordered at the October meeting of the Board—is now at work and is proving satisfactory. The failure to get the press on time has not delayed very much the work on the Directory. All of this work has been done in THE JOURNAL office, but it has necessitated work both day and night.

This extra work was only accomplished by the hearty cooperation of all the employés in the various departments. All appeared to do the work as rapidly and in the best style possible. The copies received by many of you show how well this has been done.

APPROPRIATIONS.

The following appropriations were made June, 1906, for the (fiscal) year beginning then and ending June, 1907:

Council on Pharmacy and Chemistry	$ 3,500.00
Council on Medical Education	4,000.00
Committee on Medical Legislation	1,000.00
Organizer, Dr. McCormack, employed by the Association, salary (expenses extra)	5,000.00
Secretaries of Sections	600.00
Scientific Exhibit	500.00
Scientific Research	500.00
San Francisco Fund	5,000.00
Chemical Laboratory	2,000.00
Exhibit of Hygiene	200.00
Secretary of Board of Trustees	100.00
Salary of Treasurer	200.00
Hygiene and Sanitary Science—Display of methods of filtrations, etc. (special)	200.00
Total	$22,800.00

In addition to these appropriations, about $1,000 was added to each of the three first enumerated above, making in all nearly $26,000. This does not include anything used for the purchase of machinery. The same amount at least, if not more, will be needed for the incoming year. Up to this writing only $3,000 of the appropriation to the San Francisco sufferers has been called for.

As the Association grows, the demands on the treasurer become greater. More grants are asked for each year, and your Board has made an effort to meet them with as much liberality as possible.

It must not be forgotten that the increasing circulation of THE JOURNAL demands more expenditure of money for everything connected with it. During the past year you will note, by referring to your Treasurer's report, that in November and December $10,000 was drawn each month for use in THE JOURNAL office, thus reducing your total bond and cash assets from $58,408.86 last year, Jan. 1, 1906, to $50,697.38 Jan. 1, 1907.

The Association, with this statement before it, must see that all appropriations this year must be carefully guarded. Your Trustees wish to impress on you the need of a sinking fund to meet emergencies. Had it not been for the fact of having accumulated a small surplus, the balance sheet would not have been near so favorable. Less than $150,000 reserve fund will not be enough to keep your business on a safe foundation.

You must have enough money to be able at all times to discount your bills. A further inspection of your Treasurer's report shows that you received last year $2,288.52 interest from bonds and money on deposit. Your houses yielded you a net rental of $2,480.67. If you add these two items of interest and rent together, you will see that you are getting annually nearly $5,000 from those two sources, and in addition are paying no rent for your JOURNAL office, as you did prior to the purchase of your present property.

THE JOURNAL has had a number of years of prosperity, but this can not always continue, and the only safe refuge will be a strong reserve fund. Any talk about reducing the price of THE JOURNAL before you have placed it on a sound business footing is worse than folly. Its business interests should always be carefully guarded. You must never lose sight of the fact that while your receipts from advertisements still show an increase, this is due to no growth in the space occupied, but to the higher price charged for this space. As THE JOURNAL reaches yearly a larger number of persons, proportionately, space in its advertising pages increases in value.

We would emphasize the fact that, though $25,000 worth of advertisements were refused, yet the receipts from that source exceed those of the year before by nearly $3,000.

Your bonds draw interest at the rate of 4 per cent., and your deposits of the Treasurer, when they exceed $5,000, draw 2 per cent., so you see you have no idle money.

BOOKKEEPING, ETC.

A personal inspection of books of the business of the office shows that they are well kept. Any item called for can be

shown at once. We would call special attention to the following statement of your Audit Company: "We found the bookkeeping and office work to be well and accurately done, and the condition of the same to reflect considerable credit on the office force, especially in view of the large increase in the total business done during the year."

All of your officers are bonded in reliable bonding and trust companies. It is needless to say that your property is kept insured and taxes paid when due.

PLACE OF SESSION AND EXHIBITS.

The meeting having been fixed at Atlantic City, the Chairman of your Board of Trustees appointed, as a Committee of Arrangements, Drs. Marvel, Montgomery and Welch. These gentlemen entered on their duties promptly, and at the February, 1907, meeting of the Board were able to present a preliminary report of the arrangements made for the June meeting. As this report and others that have followed have been printed in THE JOURNAL, it is not deemed necessary to reproduce them here.

For the first time in the history of the Association, you are, through your Board of Trustees, undertaking not to tax the resources of the local medical profession to provide for the meeting. The only expense which the local committee will be expected to meet will be the entertainment of the ladies visiting the session. A reception to the president of the Association will be furnished out of our own funds, but all other dinners, entertainments, etc., if desired by the Sections, will be provided by them.

The Board has felt that, as this was its first attempt to control the exhibits and to care for the meeting, everything should be on a conservative basis. The medical exhibits received will be only such as would be admitted to the advertising pages of THE JOURNAL. We hope to make the meeting a success along these lines. A more detailed report regarding this matter will be presented to the General Meeting of the Association on the first day of the session.

THE DEATH OF DR. ALONZO GARCELON.

At its annual meeting in February, the Board took note of the death of Dr. Alonzo Garcelon, who was elected one of your Trustees when THE JOURNAL was founded and was continued in that relation up to 1902. He was then chosen first vice-president of the Association.

COUNCIL ON PHARMACY AND CHEMISTRY.

The great work being done by this Council is attracting the attention of the whole medical profession. When the work of the committee was inaugurated, many appeared to believe the object of this committee to be to build up some special manufacturers of pharmaceuticals at the expense of others, but we feel sure that such an idea has entirely disappeared. The open dealing of this committee with every preparation put on the market, the bold stand against frauds and deception of all kinds, has forced the respect of all interested in honest methods.

Nothing that is intended to reach the respectable portion of the medical profession attempts to avoid the inspection and examination of that Council. The work done has been presented from time to time in the pages of THE JOURNAL. We feel that it should have the hearty support not only of this House of Delegates, but also of every member of the Association and of every honest practitioner of medicine, and that things condemned by this committee should form no part of the armamentarium medicum of any respectable physician or surgeon. Some of the chemical work of the Council will soon be undertaken in our own laboratory in the Association Building. This matter has been delayed by the congested condition of the building resulting from the preparation and printing of the Directory.

COMMITTEE ON MEDICAL LEGISLATION.

Our Committee on Medical Legislation has reported several times to your Board of Trustees, so that we have kept fully in touch with its work. The headquarters of this committee, the point from which most of its work will be done in the future, will be THE JOURNAL office. The supervision of this work will remain in the hands of the chairman of the committee, but the work will be carried on largely by one of the assistant secretaries in the office.

A full report of their work will be presented by the chairman of the committee, Dr. Charles A. L. Reed.

COMMITTEE ON MEDICAL EDUCATION.

The Committee on Medical Education will present its own report, which ought to be of great interest to the whole medical profession. The work now being done by them in visiting and inspecting in person the medical colleges of the United States and ascertaining their facilities for teaching and their methods of working can not fail to result in much good and has justified the wisdom of the sum appropriated for their use, $4,500.

CONCLUSIONS.

We have endeavored to set before you in plain terms the business affairs of your Association, and have made our financial tables as full and explicit as they should be given to the general public.

We have with us further sheets showing every officer and employé connected with the business affairs of the Association. Those paid by the month are classed under salaries; those by the week under payroll. We feel that this sheet does not belong in this report, but it is ready to be placed in the hands of the committee which passes on reports. We are ready to give you verbally any information you may desire therefrom.

The present condition of all appropriations can be also furnished you. In fact, we feel sure that every reasonable inquiry which is in any way connected with your business matters can be *answered* in full, but it would be poor policy to publish to the world the salaries paid your officials, giving names, etc., and the wages of your various employés from your linotype workers down to the girls employed by the hour wrapping THE JOURNAL for mailing.

Your Board has been encouraged through the year in its efforts to forward your interests by the fact that there has been less of carping, captious criticism on the part of persons who, knowing but little of the work being done, have waited to see results.

Your Board of Trustees, at the annual meeting, extended a vote of thanks to the Editor and General Manager, Dr. George H. Simmons, to whose untiring labors and unbounded zeal so much of the results of the past year's work has been due. He is never content with what has been achieved, but is ever on the outlook for further avenues of improvement.

Trusting that we have succeeded in presenting you a plain and distinct statement of the work of the fiscal year ending Dec. 31, 1906, we close this report.

W. H. WELCH,	PHILIP MARVEL,
W. W. GRANT,	M. L. HARRIS, Secretary.
MILES F. PORTER,	E. E. MONTGOMERY, Vice-Chairman.
H. L. E. JOHNSON,	
A. L. WRIGHT,	T. J. HAPPEL, Chairman.

Report of Committee on Senn Medal.

In the absence of Dr. A. F. Jonas, Omaha, Chairman of the committee, the report was read by the Secretary, as follows:

Your committee begs leave to report on the award of the Senn Medal for the best original essay pertaining to some surgical subject. Your committee was instructed to award this medal. Your committee would suggest that a permanent advernew method in the treatment of a surgical disease or showing new facts along the lines of original research.

Your committee begs leave to report that only two essays were submitted for examination during the past year. Neither one of them contained original matter that in any way advanced our knowledge in any department of surgery. Therefore, your committee has unanimously voted not to award the medal. Your commitee would sugest that a permanent advertisement be placed in the advertising pages of THE JOURNAL of the American Medical Association setting forth the conditions under which this medal is to be awarded.

Respectfully submitted,

A. F. JONAS, Chairman,
H. M. SHERMAN,
J. F. BINNIE.

This report was referred to the Reference Committee on Sections and Section Work.

Report of Council on Medical Education.

READ AND REFERRED TO COMMITTEE.

Dr. Arthur D. Bevan, Illinois, Chairman, read the report of the Council on Medical Education. This report was printed in THE JOURNAL, May 18, 1907, page 1701.

On motion, the report was referred to the Reference Committee on Medical Education.

Report of Committee on Medical Legislation.

READ AND REFERRED TO COMMITTEE.

Dr. Charles A. L. Reed, Ohio, presented the report of the Committee on Medical Legislation.

To the House of Delegates of the American Medical Association:

Your Committee on Medical Legislation begs leave herewith to submit its report for the year ending June 1, 1907. In doing so it offers as a part of that report the "Record of the Conference of the Committee on Medical Legislation with the National Legislative Council, held at Washington, D. C., Dec. 13, 14, 15, 1906," published by the Association in January, 1907.

MEDICAL LEGISLATION BEFORE THE FIFTY-NINTH CONGRESS.

It is opportune in this connection to give a brief résumé of the legislation that has been pending before the Fifty-ninth Congress that expired in March, 1907, and with which legislation your committee has been more or less identified.

THE PURE FOOD AND DRUG BILL.

This measure (known as Senate Bill No. 88) had a long and difficult career before two Congresses. It was antagonized by the proprietary medicine trust, by the manufacturers of spurious whisky, by the makers of adulterated foods and by all of the purveyors of these commodities that could be whipped into line by the manufacturing interests affected by the then proposed legislation. The opposition was not confined to open antagonism, but manifested itself on the floor of both houses by insidious efforts to change definitions and thereby weaken, if not entirely destroy, the object aimed at. More than one such effort was successfully made by men who came soon to be known as the direct representatives of antagonistic interests, men who, indeed, were openly spoken of in the galleries and lobbies by the representatives of blended whiskies, quack nostrums and spurious foods as "our men." In more than one instance of this kind the antagonist of the bill having emasculated it to the extent of his ability in committee, took pains to cover his tracks by voting for the mutilated measure when it was finally placed on its passage.

It will be recalled that this bill, which had passed the Senate Feb. 21, 1906, by a vote of 63 to 4, was still pending in the House when the American Medical Association met last year in Boston. Strong representations were then telegraphed to the speaker, by whose arbitrary action it was at that time being kept from consideration, and to the chairman of the committee on rules. Within twenty-four hours after those representations were telegraphed a rule was issued and a vote was reached June 23, 1906, when the bill in amended form passed the House on a vote of 241 yeas to 17 nays; 9 answering present and 112 making no answer at roll call. After some disagreements in conference the two houses finally, on June 29, adopted a conference report and the President approved the bill June 30, 1906. Thus ended one of the longest and most difficult struggles for reformatory legislation in recent years, and one the success of which, according to the public declaration of Senator Heyburn, the author of the measure, could not have been achieved without the powerful and beneficent influence of the American Medical Association.

A BILL FOR THE RELIEF OF DR. JAMES CARROLL.

The attention of the Congress was called to the case of Dr. James Carroll by the legislative conference for 1906. A bill was thereafter introduced by request by Senator Dick of Ohio, providing a certain measure of relief. The bill went to the committee on military affairs, where its author permitted it to slumber until the first session had expired. In December, after the opening of the second session of Congress, your Legislative Conference, ascertaining that the bill was still in committee, adopted the following expression of views:

"The ultimate completion of the Panama Canal, the present salubrity of Cuba, the safety of our southern seaboard against periodic invasion by epidemics, the maintenance of life and health of our citizens in that great section, and the stability of our national commerce against disturbance from the same cause, all are made possible by the discovery that the mosquito is the carrier of the contagion of yellow fever. That fact was established by the labors of three men, two of whom in the interests of humanity and science subjected themselves to inoculation by infected mosquitoes. As a result of that experiment, one of them, Mr. Jesse W. Lazear, within the next few days, died a martyr's death, the other, Dr. James Carroll, survived to live a martyr's life. The only reward that he has thus far received is a disease of the heart that occurred as a result of the yellow fever, that he voluntarily contracted for the welfare of his race. This man, this hero, after risking his life to give this priceless boon to the world, after incurring a permanent invalidism in that cause, after having spent 34 years in the faithful service of his country, is permitted to remain only an assistant surgeon with the rank of first lieutenant in the United States Army, with the paltry salary of an officer of this grade. And with broken health this man, far past the meridian of life, is supposed to meet the obligations resting on a husband, the father of seven children, and to provide against the requirements of old age. A bill for his relief, endorsed by this Council at its last conference, was introduced in the Senate but has never been reported out of committee. This is a shame. Surely if Congress understood the facts of the case the bill would pass within an hour by the concurrent action of both houses. To permit it longer to slumber will be to bring the blush of humiliation to the cheek of every intelligent and grateful citizen of the republic."

Your committee, acting with the National Legislative Council, thereupon presented the foregoing to Senator Warren, chairman of the Senate committee on military affairs. The response from Senator Warren was instant and enthusiastic, and, as a result, the bill authorizing the President to appoint James Carroll a surgeon, with the rank of major, in the Medical Corps, U. S. Army, and providing that "the number of officers in the Medical Corps be increased by one with the rank of major, for this purpose," passed the Senate February 19, and the House, Feb. 27, 1907. In reviewing the history of this measure the first regret experienced is that the author of the bill, who introduced it by request, permitted it to go by default for so long a time, thereby placing the United States Senate in the mistaken attitude of seeming to be ungrateful for the most heroic service that had been rendered to science and to mankind in the last quarter of a century, and the next and final regret was that the increased rank accorded to Lieutenant (now Major) Carroll was less than a full recognition of his services and of the martyrdom that he has, in consequence, sustained. The generous spirit, the tone of genuine appreciation manifested by Congress when once it had the facts presented, must be taken, however, as an evidence of intelligent gratitude on the part of our great national legislative assembly.

THE ARMY GENERAL HOSPITAL.

The effort to secure a suitable general hospital for the Army, begun several years ago by Surgeon-General O'Reilly, and supported by your committee, took definite shape in the form of an item in the sundry civil bill for 1906, introduced by Senator Proctor, authorizing the expenditure of $100,000 with which to purchase a site and $300,000 with which to construct the building. This was finally reduced to $200,000 for the building. The site was purchased, but the money for the building not being immediately available under the previous legislation, an item was inserted in the urgent deficiency bill for the first session of the Fifty-ninth Congress, making the sum of $200,000 immediately available for the purpose. This was passed and duly approved, thus making certain that we are to have at least the beginning of a general hospital for

the Army that shall conform to the requirements not only of the Army, but of science and humanity.

IMPROVEMENTS IN THE SURGEON-GENERAL'S OFFICE.

An item in the Sundry Civil Bill for the fiscal year of 1906 provided for an appropriation of $8,000 for book stacks in the library hall, including iron supports, stairs, perforated gallery floors and necessary hard-wood shelves for the Library of the Surgeon-General's Office. This is less than half the amount that ought to be expended for this purpose, as thousands of volumes are now inaccessible for want of shelving on which to mount them, but it was all that could be procured at the time. An early opportunity will be taken to ask Congress for an additional appropriation.

THE ARMY MEDICAL REORGANIZATION BILL.

This thoroughly meritorious measure was first introduced in the Fifty-eighth Congress and passed the Senate and was reported out of committee in the House. At this point, however, it encountered the opposition of Speaker Cannon, who arbitrarily excluded it from consideration on the floor. The Fifty-ninth Congress has furnished an exact repetition of that experience. Your committee, in company with the National Legislative Council, called in a body on the Speaker. The interview was far from satisfactory, revealing as it did, on the part of the Speaker, an offensive lack of appreciation not only of the Medical Corps of the Army in particular, but of the medical profession in general. The bill will be introduced in the Sixtieth Congress, which assembles in December of this year. There is little if any doubt but that its reasonable provisions will again commend themselves to the favor of both branches, but there is little prospect of securing its passage if Mr. Cannon shall again be Speaker—which seems to be a foregone conclusion—and so long as he shall be vested with the power that now pertains to that office, and particularly so long as he shall see fit to exercise that power for the gratification of personal prejudice and to the detriment of a public service whose importance is strictly fundamental in character.

AMERICAN MEDICAL PRACTITIONERS IN HONG KONG.

In the autumn of 1906 information was forwarded to your committee that under the terms of the Anglo-Japanese treaty the graduates of the Japanese medical schools were permitted to practice in Hong Kong, but that the same privilege was denied to the graduates of American medical schools. An inquiry as to the facts was at once forwarded to the State Department at Washington and by that department to the American embassy at London. From this point the inquiry is making its gradual but necessarily long course through official channels. In the meantime supplementary information from the same source, but based on semi-official statements by the authorities of Hong Kong, has reached your committee to the effect that the practice of medicine in Hong Kong is regulated by the Imperial Medical Practice Act of Great Britain, under the terms of which a five-years course of medical instruction prior to graduation is made a prerequisite for licensure; that under the terms of this act no discrimination whatever has been or is being exercised as between the graduates of various nationalities; and, finally, that the practice of medicine in Hong Kong is not in the least modified by the Anglo-Japanese treaty. The incident is recited in this connection as showing the importance of sifting information to the bottom, and as showing furthermore the relative position among the nations imposed on the American medical profession in consequence of the relatively short curriculum now in vogue in this country.

THE STATUS OF THE MEDICAL SERVICE IN THE ISTHMIAN CANAL ZONE.

When the Panama Canal Commission was first organized the American Medical Association made strong representations to the effect that, considering the fact that the sanitary problem had to be solved before the work of actually digging the canal could be carried on, it ought to be represented in the personnel of the commission. Dr. Gorgas was accordingly urged for appointment as a member of that body. The President did not, however, find himself at liberty to make such an appointment at the time. As a result, it presently developed that not only Dr. Gorgas, but the whole sanitary service was subordinated in the seventh degree below the appointive power, with a corresponding restriction in the right of initiative in the practical problems that had to be solved. The agitation, notwithstanding some unpleasant incidents, was continued during the ensuing two years, with the result that within the last few months the President, under the advice of the Secretary of War, has appointed Colonel Gorgas a full member of the commission in special charge of sanitation. This change of status can not but be exceedingly gratifying to every physician in the country, as it is to your committee, indicating as it does that the just claims of the medical profession to recognition in administrative capacities is appreciated by the present administration. The hope is entertained that the Congress will take an equally advanced and just position in any future legislation, especially when dealing with problems that appeal in a peculiar way to the special intelligence of the medical profession.

MEDICAL REPRESENTATION ON THE GENERAL STAFF OF THE ARMY.

It is a satisfaction to report that the advanced and improving status of the medical profession in the public services is still emphasized by representation of the Medical Corps of the Army on the General Staff. It will be remembered that, as originally constituted, the Medical Corps was excluded from this most important governing body of the Army. The line officers, of which it was composed, representing every other branch of the military service, while relying constantly on the Medical Corps for advice, strenuously opposed anything like medical representation in the personnel of the General Staff itself. This condition was promptly corrected by executive order issued by the present Secretary of War.

THE OSTEOPATHIC BILL FOR THE DISTRICT OF COLUMBIA.

A bill to regulate the practice of osteopathy, to license osteopathic physicians and to punish persons violating the provisions of the act, was introduced in the first session of the Fifty-ninth Congress. It was, of course, referred to the Committee on the District of Columbia, with which arrangements had been made by representatives of the medical profession for a hearing. Suddenly, however, without notice to the opponents of the measure, and in the absence of a quorum, Senator Foraker reported the bill from committee and asked for unanimous consent for its consideration. It was accordingly passed by the Senate June 29, 1906, the point of no quorum not having been raised out of deference to the request of Senator Foraker. The measure had reached this stage when your committee took it under advisement at the legislative conference in December, when it was found that the object of the bill was to legalize a medical cult on an educational basis of twenty-seven months' study of only a partial medical curriculum. On this ground your committee was directed by the conference to make the bill the subject of a general referendum, and at the request of Dr. A. J. Barchfeld, member of Congress from Pennsylvania, it was referred to the medical delegation in the House of Representatives as a special committee, with power to act. The referendum was made, and protests, numerously signed by the general public, came in from every part of the country. These were sent to Dr. Barchfeld, by whom they were brought to the attention of the House. By these representations and by their personal influence the three medical members of Congress were able to defeat this distinctly pernicious measure in committee.

THE CANTEEN BILL.

This measure, which contemplates the restoration of the canteen in the Army, failed of passage by the last Congress. Sentiment on this subject seems to be so acute and so evenly divided that Congress seems reluctant to act, notwithstanding the increasing demoralization among the soldiers, which has followed as a consequence of the abolition of the canteen—a fact of which your committee is abundantly assured by representatives of the rank who are interested in everything calculated to promote the moral and physical welfare of the men under them. This bill is being looked after by Dr. H. L. E. Johnson, as a special committee.

THE HAMMOND BILL.

This is a bill for the relief of the widow of the late Dr. William A. Hammond, some-time Surgeon-General of the United States Army, and like the preceding bill, has been very kindly taken charge of by Dr. Johnson, who reports as follows:

"The Hammond Bill, slightly modified, has passed the Senate and is now in the hands of the Claims Committee of the House. Instead of sending it to the Military Committee, it was arranged that that would go to the Claims Committee. The Claims Committee has been acting on it, but has been in doubt as to whether the general government intended the withdrawal of pay from Dr. Hammond as punishment, or, in other words, whether or not the vindication was a complete one.

"The committee gave me two hearings on that subject, and at the close of the session they had practically made up an unfavorable report based on that supposition. However, after having another hearing with the committee, they agreed that if I could demonstrate to the committee the fact that Congress had not stricken out the clause covering the matter of pay, and that that was done at the request of Dr. Hammond because he was at that time a very rich man and did not want any financial aid from the government, they would reopen the matter and give me another hearing. That is now the only question in point. I think I have secured all the data covering that point from the records in Congress and elsewhere, but I should ask that this conference urge again on Congress the propriety of the passage of the bill, which is now Senate Bill No. 290, and I also recommend the continuance of the committee."

A BILL TO CREATE A NATIONAL DEPARTMENT OF PUBLIC HEALTH WITH REPRESENTATION IN THE CABINET OF THE PRESIDENT.

A measure of this purport was drawn up in the form of a preliminary draft by Dr. Barchfeld, member of Congress from Pennsylvania, and was placed by him in the hands of your committee to be perfected before being presented by him to the House. This draft was in the hands of your committee on the occasion of its last annual report, when a request was made that the House of Delegates appropriate $1,000, or so much of the same as might be needed, to have the bill carefully drawn by competent legal authority. The bill itself was approved and the appropriation was directed by your honorable body. The Board of Trustees, however, declined to recognize the action of the House of Delegates as binding in this matter, and refused to ratify it by formal authorization of the expenditure. Your committee, feeling that it was not justified in presenting to Congress a measure that it was not assured would stand the most critical scrutiny, particularly when involving so momentous a question as the creation of a department of our National Government, was forced simply to accept the decree of the Board of Trustees.

In the meantime, however, the American Association for the Advancement of Science authorized the creation of a popular "Committee of One Hundred" to consider methods of establishing a national department of health. This committee was organized under the presidency of Prof. Irving Fisher of Yale University. The chairman of your committee, recognizing the announced object of this new organization to be identical with the repeatedly expressed objects of the American Medical Association in this regard, accepted membership on the Committee of One Hundred. The Legislative Conference, finding that it was without funds with which to perfect its own measure, turned the same over to the Committee of One Hundred on the very kind suggestion of Professor Fisher that some legal members of that committee could be induced to do the work. The hope is entertained that this step will result in the preparation of a bill which will meet the views of the entire medical profession.

A BILL TO PROVIDE TRAINED NURSES FOR THE NAVY.

Your committee has learned with extreme satisfaction that Surgeon-General Rixey is preparing to make a strong appeal to Congress at its next session to correct a lamentable deficiency in the medical branch of the naval service. The Surgeon General points out that the American Navy is without a single trained nurse. No matter how severe the illness of the officers and sailors, nor how grave the injury or wound received in the line of duty, the American bluejacket must rely for his care in time of trouble on a hospital steward and an apprentice. In ordinary times the ships' surgeons are often taxed to care properly for the normal number of sick and injured aboard ship. When there is an epidemic of fever or measles (the latter often a serious malady among male adults), such as occurred not long ago on the battleship *Connecticut*, it has been found impossible to give the invalids the necessary scientific and careful nursing required by their illness.

Surgeon-General Rixey has therefore worked out the details of a plan for the organization of a corps of trained nurses, such as the Army has.

Afloat these nurses will necessarily be men, but in the Navy hospitals ashore, where the more difficult, lingering and dangerous cases are treated, women nurses will be employed. For $45,000 Admiral Rixey feels that he can make a respectable beginning in the organization of such a corps, and he is seeking support from the Secretary of the Navy and the President in securing the necessary appropriations by Congress. This measure, it is needless to say, should and doubtless will receive the cordial support of the entire medical profession.

Your committee begs leave to state that it has conferred with representatives of the Committee of One Hundred; that as a result of such conference it has become apparent that said Committee of One Hundred has begun a broad, comprehensive and vigorous campaign in the interest of increased federal activity in the control of national public health interests and that the distinguished personnel of that committee, together with the plane of high efficiency on which it is organized, entitle it to the fullest confidence not only of the medical profession, but of the entire public. It has become apparent, however, that while the announced purpose of said Committee of One Hundred was to consider methods of establishing a national department as distinguished from a national bureau of public health, it has been made apparent by the work already accomplished that to accomplish the purpose for which it was created, the Committee of One Hundred must be left with the fullest possible discretion as to details of the proposed legislation. It is suggested, therefore, that this Association at its present session, adopt a formal expression to the effect that, while not receding from its previously expressed preference for a department of public health established on a footing of equality with other executive departments of the government, it leaves all questions of detail as to the organization, powers and status of the proposed national public health agency to the said Committee of One Hundred, to which it pledges its loyal and persistent support.

THE QUESTION OF UNIFORM STATE LAWS.

As will be seen from the record of the Legislative Conference, your committee has urged the necessity of taking an important step looking to the promulgation of standard bills to be passed by state legislatures relating more particularly to the practice of medicine and to pure food and drugs. The conference took up both of these questions and now has them under advisement in committee. In the meantime, it is interesting and important to know that there is a "Uniform Laws Commission," consisting of a commissioner appointed by each of the different states, that meets coincidently with and really under the auspices of the American Bar Association, and that now has under advisement a standard pure food and drug bill. It is a matter of some interest and of possible instruction to add that this commission, which is composed of able lawyers, and which has already formulated and secured the adoption of several standard acts, notably one on negotiable instruments, feels itself incompetent to make the final drafts of its measures and employs the best experts it can find to do the work.

THE MEDICAL DELEGATION IN CONGRESS.

The extreme importance of actual representation of the medical profession on the floor of Congress was illustrated by the defeat of the Osteopathic Bill in committee of the House.

This is the first time since your committee, as now constructed, has had the advantage of medical membership in the House of Representatives. In the Fifty-ninth Congress there were, in the House, three physicians. Dr. Andrew Jackson Barchfeld, representative from the Thirty-second Pennsylvania District, graduated in medicine in 1884, and is a surgeon of prominence in Pittsburg, where he resides, being a member of the staff of the South Side Hospital of that city. He is a member of professional organizations from his county society to the American Medical Association. Dr. Hiram Rodney Burton, representative-at-large from the State of Delaware, has been for thirty-five years a practitioner of medicine in his native town of Lewes, and in every way identified with the activity and welfare of his county and state. Dr. Edmund William Samuels, the representative from the Sixteenth Pennsylvania District, is another active practitioner of medicine who has served his community in various public capacities before coming to Congress. In the Senate, from New Hampshire, is Dr. Jacob H. Gallinger, who as a practicing physician in Concord, for many years enjoyed a reputation that extended over the larger part of New England. He began his political career as a representative in his state legislature in 1872. He has since served as a member of a constitutional convention, surgeon general of his state, representative in Congress, and finally United States Senator.

The importance already emphasized of having physicians in Congress is made still further apparent by the various measures that will shortly be presented for action. The hope is entertained that a larger number of physicians than heretofore will offer themselves for both branches of Congress.

AN ENLARGED LEGISLATIVE POLICY.

The policy of your committee acting with the National Legislative Council and limited by the resources at its command, has restricted its activities chiefly to questions of strictly national concern. It is evident, however, that with the increasing necessity for the formulation of certain standard laws must come an increasing necessity for securing their uniform adoption by the different states, and that this, in turn, must call for a more or less uniform and harmonious organization with which to carry the plan into effect. The chain of influences points directly to the American Medical Association as the only agency available for the purpose. It would seem, therefore, that we may as well arrange, first as last, for precisely this direction of our labors.

THE BUREAU OF MEDICAL LEGISLATION.

This branch of the legislative work of the Association, pursuant to your action last year, has been begun. In consequence of the crowded condition of the Association building at Chicago, it was late in the year before the necessary steps could be taken. The present arrangement now relieves your committee of much detail work, and has materially increased the efficiency of the organization. To meet the growing demands of the movement, however, particularly if the work of active participation in state legislation is undertaken, a larger clerical force must be employed.

Very respectfully submitted.

CHARLES A. L. REED,
WILLIAM H. WELCH,
WILLIAM L. RODMAN,

Committee on Medical Legislation.

This report was referred to the Reference Committee on Legislation and Political Action.

Dr. Frank Billings, Illinois, offered the following resolutions:

WHEREAS: There exists among the indigent many deformed and ruptured children, who could be much improved by modern scientific treatment, if the condition of this class of people were known and

WHEREAS: Statistics of this class of people could be taken without much additional expense to the government, and by this means the facts concerning the number of deformed and ruptured children would be definitely known: therefore be it

Resolved: That the House of Delegates of the American Medical Association requests the Director of the United States Census to include in the next census an enumeration of the deformed and ruptured children in the United States.

Resolved: That the Secretary of this Association be instructed to forward this resolution to the director of the United States Census.

This resolution was referred to the Reference Committee on Hygiene and Public Health.

Proposed Amendments to By-Laws.

The Secretary read the following amendments to the By-laws, which were offered by Dr. J. W. Grosvenor, New York:

All reports to the House of Delegates shall be acted on seriatim, except such reports as contain only one proposition.

In balloting for all elective officers, and for the place of meeting of the Association, each member of the House of Delegates shall cast his own ballot.

These amendments were referred to the Reference Committee on Amendments to the Constitution and By-laws.

On motion, the House of Delegates then adjourned until 2 p. m.

NEW MEMBERS.

List of new members of the American Medical Association for the month of May, 1907:

ALABAMA.

Brooks, O. J., Huntsville.
Bruce, H. S., Opelika.
Douglass, A. G., Birmingham.
Long, W. W., Birmingham.
Rau, G. R., Tuscaloosa.
Sanders, W. S., Troy.
Wilkerson, C. A., Marion.
Zimmerman, A., Florence.

ARKANSAS.

Bailey, J. E., Huttig.
Bright, D. W., Lewisville.
Duncan, M. W., Bentonville.
Hoover, A. S., Stamps.
Miller, S. E., Dardenelle.
Morris, J. W., Denton.
Reed, C. C., Hensley.
Thompson, H. M., Marvell.
Tyner, H. V., Walcott.

CALIFORNIA.

Austin, R. E., San Diego.
Avery, R. W., South Pasadena.
Curtis, E. D., Woodland.
Dannenbaum, S. R., San Francisco.
Edwards, W. R. J., Los Angeles.
McCarty, I. A., Los Angeles.
Reiche, Cecelia, Los Angeles.
Turner, J. S., Los Angeles.

COLORADO.

Arnold, W. W., Colorado Springs.
French, Samuel, Denver.
Grant, A. E., Denver.
Hurd, L. C., Durango.
Long, Margaret, Denver.
Moore, A. M., Brighton.
Purcell, J. M., Denver.
Rosebrough, Thos., Hooper.
Timmons, E. L., Colorado Springs.

CONNECTICUT.

Ashley, E. F., Waterbury.
Cheney, B. A., New Haven.
Fisher, W. E., Middletown.
Haskell, C. N., Bridgeport.
Sunderland, P. A., Danbury.
Welch, T. F., Hartford.

DELAWARE.

Carlisle, P. T., Milford.
Haines, W. F., Seaford.
Tomlinson, P. W., Wilmington.

DISTRICT OF COLUMBIA.

O'Donoghue, J. A., Washington.
Vale, F. P., Washington.
Watkins, Edgar W., Washington.

FLORIDA.

Saxton, D. E., Tampa.
Turner, J. W., Otter Creek.

GEORGIA.

Boatright, Homer, Carrollton.
Battey, W. M., Augusta.
Kemp, A. J., Leslie.
Monroe, D. H., Emerson.
Moore, J. L., Griffin.
McCurdy, E. C., Shellman.
Orman, Daniel, Tifton.
Train, J. K., Savannah.
Williams, C. L., Columbus.
Wilson, W. S., Savannah.
Warthen, W. B., Bartow.

IDAHO.

Patterson, J. C., Milner.

ILLINOIS.

Allison, Frances M., So. Wilmington.
Anderson, W. J., Chicago.
Beals, F. M., Mattoon.
Brennemann, Joseph, Chicago.
Bryan, T. A., Lerna.
Burrell, P. J., Winslow.
Carpenter, J. H., Chicago.
Cooley, W. M., Peoria.
Dittman, G. C., Chicago.
Frazer, M. D., Bridgeport.
Gill, J. J., Chicago.
Hamilton, L. O., Roodhouse.
Kionka, P. B., Melrose Park.
Knapp, D. M., Mendon.
Little, E. H., E. St. Louis.
Lynch, F. W., Chicago.
Martin, G. H., Chicago.
McCormack, J. L., Bone Gap.
Mercer, Ray, Loraine.
Metcoff, Samuel, Chicago.
Miller, L. C., Rantoul.
Moore, D. G., Chicago.
Murphy, J. H., Geneseo.
Orndorf, B. H., Chicago.
Osborne, J. W., Champaign.
Parker, G. W., Peoria.
Poindexter, R. E., Benton.
Prescott, Eva, Chicago.
Rust, J. W., Willow Springs.
Schultze, L. C., Chicago.
Smith, H. Le Roy, Ivesdale.
Solsem, F. N. S., Creston.
Steffen, R. C., Chicago.
Tufts, F. S., Chicago.
Walker, R. J., Chicago.
Wayland, Shipley, Chicago.
Williams, W. C., Peoria.
Wilson, J. M., Marissa.
Wiseman, W. A., Camargo.

INDIANA.

Allen, Wesley, West Newton.
Andrews, Leila E., N. Manchester.
Atkinson, J. M., Eaton.
Caylor, C. E., Pennville.
Clippinger, R. D., Bellefontaine.
Fink, O. E., Terre Haute.
Hamer, H. G. Indianapolis.
Jay, M. F., Portland.
Northrup, A. H., Markle.

INDIAN TERRITORY.

Amerson, C. W., Cheek.
Barton, V. H., So. McAlester.
Brannon, T. C., Pauls Valley.
Briggs, T. H., Atoka.
Bryant, C. E., Muskogee.
Brymer, W. G., Comanchee.
Craig, J. W., Vinita.
Culp, A. H., Biggs.
Davis, A. B., Sneed.
Fulton, J. S., Atoka.
Henry, R. H., Ardmore.
Herron, A. W., Adair.
High, W. C., Maysville.
Hoss, Sessler, Muskogee.
Hume, W. McG., Coalgate.
Owens, B. B., Minco.
Patterson, Price, Maysville.
Rappolee, H. E., Caddo.
Sackett, L. M., Wilburton.
Shippey, E. E., Wister.
Terrell, J. C., Durant.
Willard, R. S., Brock.

IOWA.

Allen, R. W., St. Anthony.
Anthony, Enoch, Ottumwa.
Banning, G. W., Davenport.
Barnhart, T. C., Germania.
Bruner, J. E., Thompson.

Charlton, M. R., Clear Lake.
Coulter, J. H., Summitville.
Doolittle, J. C., Des Moines.
French, C. H., Cedar Rapids.
Gaard, R. R., Radcliffe.
Gray, H. A., Keokuk.
Hamilton, H. B., Ainsworth.
Oden, R. J. E., Ottumwa.
Spencer, H. D., Oakland.
Pennington, B. S., Mediapolis.
Warnock, F. B., Sioux City.
Whitemore, C. B., Cedar Rapids.
Woodcock, G. A., Armstrong.

KANSAS.

Anderson, S. M., Wichita.
Boardman, E. W., Parsons.
Clary, L. A., Winfield.
Evans, J. L., Wichita.
Gooch, W. S., Mapleton.
Hampshire, S. J., Overbrook.
Hobson, J. H., Whitecloud.
McNaught, J. F., Girard.
Montgomery, J. R., Smith Center.
McNally, M., Michigan Valley.
Reynolds, C. W., Holton.
Turner, A. J., Centerville.

KENTUCKY.

Adamson, H. K., Maysville.
Aivey, N. R., De Koven.
Broaddus, B. S., Crystal.
Dorris, S. M., Bandana.
Dorroh, Lee, Fredonia.
Dorsey, J. T., Frankfort.
MacElliott, Wm., Bryantsville.
Graves, W. H., Murray.
Jones, J. F., Mt. Sterling.
Lovan, G. W., Nortonville.
Lutz, J. S., Highland Park.
Martin, S. J., Bowling Green.
Nichols, W. F., Munfordville.
Norfleet, Carl, Strunk.
Porter, R. H., Glasgow.
Sarlles, G. L., Sanders.
Slater, C. R., Erlanger.

LOUISIANA.

Ford, T. G., Shreveport.
Griffin, L. M., Oakley.
Montegut, Sidney, Laplace.
Poret, E. A., Hessmer.
Soniat, J. Moore, New Orleans.
Woodall, J. L., Montgomery.

MARYLAND.

Elrley, Clara S., Hagerstown.
Ellis, A. Lee, Baltimore.
Flechenstein, H. K., Baltimore.
Gambrill, W. B., Alberton.
Green, J. S., Gittings.
Hazen, H. H., Baltimore.
Lennan, A. B., Baltimore.
Smith, H. L., Baltimore.
Williams, Dudley, Baltimore.

MASSACHUSETTS.

Blaine, W. E., Mattapoissett.
Blake, Gerald, Boston.
Boom, A. K., Adams.
Burnham, Parker, Gloucester.
Douglas, A. J., Westfield.
Fleming, A., Lawrence.
Goodell, Wm., Springfield.
Graves, B. A., Dorchester.
Halpin, A. J., Lowell.
Harrington, M. W., Indian Orchard.
Hartwell, W. W., Malden.
Kelly, W. P., Pittsfield.
Merrick, R. M., Boston.
Shanahan, E. J., Taunton.
Sullivan, W. J., Lawrence.
Toohey, T. V., Boston.
Wells, D. W., Boston.

MICHIGAN.

Kelsey, L. E., Lakeview.
Koon, T. M., Grand Rapids.
Lea, Juanita L., Detroit.
McClure, F. E., Detroit.
Ponpen, H. J., Forestgrove.
Smith, F. J., Ithaca.
Van Slyke, W. H., Hancock.
Weed, J. W., Brown City.

MINNESOTA.

Balcome, F. E., St. Paul.
Barck, G. W., Albert Lea.
Benson, I. S., Jackson.
Bossesen, W. A., Albert Lea.
Bigelow, E. E., Owatonna.
Bole, R. S., St. Paul.
Brown, E. L., St. Paul.
Brynildsen, H. L., Vasa.
Cannon, C. M., St. Paul.
Corry, W. M., Waterville.
Dinwoodie, Wm., St. Paul.
Dohm, C. L., St. Paul.
Doran, G. M., St. Paul.
Ericson, J. G., Minneapolis.
Fifield, Emily W., Minneapolis.
Grimes, H. B., Lake Crystal.
Hammond, W. D., Isanti.
Hilger, A. W., St. Paul.
Johnson, A. M., St. Paul.
Linde, Herman, Cyrus.
Moynihan, A. F., Sauk Center.
Nickerson, W. S., Minneapolis.
Nve, W. F., Minneapolis.
Plondke, F. J., St. Paul.
Robinson, L. S., St. Paul.
Schlick, A. T., Duluth.
Smith, C. E., St. Paul.
Smith, S. W., Ponsford.
Sogge, L., Windom.
Sweney, C. F., St. Paul.
Wright, C. B., Minneapolis.

MISSISSIPPI.

Byrd George Wm., Isola.
Bynum, I. M., Boonville.
Donaldson, R. P., Pontotoc.
Goodman, H. S., Cary.
Lilly, J. G., Natchez.
Laird, J. S., Decatur.
Molloy, R. C., Columbus.
Price, D. T., Booneville.
Robinson, S. W., Pisgah.
Rosamond, J. S., West.
Seward, Doyle, Eden.
Walley, Willis, Richton.
Womack, N. C., Jackson.

MISSOURI.

Barrington, R. M., St. Louis.
Belden, W. E., Columbia.
Bewig, H. W., St. Louis.
Bigham, D. F., Easton.
Blakesley, T. S., Kansas City.
Blattner, F. O., St. Louis.
Boggs, J. D., St. Louis.
Bowen, J. K. P., St. Joseph.
Brown, A. C. F., St. Louis.
Brown, C. H., Fairplay.
Brogles, F. H., Bethany.
Cannon, G. S., Fornfelt.
Clarke, B. W., St. Louis.
Curl, A. C., Cross Timbers.
Dandurant, L. J., St. Joseph.
Dillon, Marion, Fairfield.
Dunkison, E. B., Hatfield.
Edwards, G. W., Brunswick.
Faires, O. P., Kansas City.
Finney, W. B., Kennett.
Gifflit, C. E., Winsor.
Hardin, T. L., Defiance.
Huyford, W. B., Pickering.
Hofmann, Ottokar, Jr., Kansas City.
Hoshor, J. C., Rosendale.
Hull, W. S., Faucett.
Hyde, Frank, Greenfield.
Jackson, C. A., Kansas City.
Jarrett, S. S., Pattonsburg.
Jarvis, W. M., Slater.
Jennett, H. N., Kansas City.
Jones, K. P., Kansas City.
Koltenbach, Ernst, Craig.
Kerr, Wm. M., Savanna.
Korn, A. L., Carthage.
Krebs, G. A., St. Louis.
Krug, F. H., St. Louis.
Lewis, A. L., Sumner.
Loafman, J. E., Bolivar.
Loveland, W. S., Verona.
Lyon, G. E., St. Louis.
Mangus, C. W., Moberly.
McArthur, A. W., Kansas City.
McBride, W. L., Kansas City.
Miles, Horine, Webster Groves.
Miller, D. E., Monett.
Miller, E. E., Mound City.
Morrell, M. P., St. Louis.
Norberg, G. B., Kansas City.
O'Flaherty, A. E., Kansas City.
Norris, E. J., St. Louis.
Ogle, O. L., St. Louis.
Orr, C. J., St. Louis.
Parman, D. R., St. Louis.
Patrick, P. S., Bucklin.
Pearson, D. M., Louisiana.
Penners, A. W., Rochenport.
Pollard, M. M., Barnard.
Pope, Sherman, St. Louis.
Randle, H. T., Clayton.
Rohlfing, A. H., St. Louis.
Ruddell, G. W., St. Louis.
Sands, M. L., Cole Camp.
Soelig, M. G., St. Louis.
Senn, George, St. Joseph.
Sheahan, E. T., St. Louis.
Shoemaker, J. F., St. Louis.
Short, M. J., Rolla.
Simcoe, C. B., St. Joseph.
Simon, F. C., St. Louis.
Smith, D. G., Arkoe.
Swaney, A. G., Lee's Summit.
Todd, J. H., Marysville.
Voegelin, Samuel, Kansas City.
Wade, S. J., Benton.
Wilson, A. M., St. Louis.
Wilson, C. E., Kansas City.
Wobus, R. E., St. Louis.
Wooden, I. M., Dawn.
Woodson, C. R., St. Joseph.
Woolsey, R. A., St. Louis.

MONTANA.

Jump, C. W., Bozeman.
Lanstrum, M., Helena.
MacKenzie, T. A., Miles City.
Russell, J. H., Fort Benton.
Shere, W. B., Gardiner.

NEBRASKA.

Brown, G. M., Central City.
Byers, G. A., Snyder.
Gritzka, C. T., Talmage.
Henry, Charles, Hebron.
Lyman, R. A., Lincoln.
Sixta, L. H., Schuyler.
Whitmyre, J. P., Aurora.

NEVADA.

Huffaker, Anthony, Carson City.

NEW JERSEY.

Adams, J. K., Orange.
Alexander, A. F., Paterson.
Allen, Edgar, Pattenburg.
Beling, C. C., Morris Plains.
Bingham, A. W., East Orange.
Blenckstone, F. O., Oradell.
Buckingham, F. S., Lakewood.
Bushey, S. G., Camden.
Buvinger, C. W., East Orange.
Clark, Emma C., Dover.
Coe, Richard, Newark.
Cohen, N. A., Wildwood.
Condict, I. W., Dover.
Davis, W. C., Jr., Atlantic City.
Decker, C. L., Boonton.
Dodd, S. W., Montclair.
Edwards, J. G., Williamstown.
Fithian, G. W., Perth Amboy.
Garside, C. Z., Newark.
Gilchristy, C. A., Hoboken.
Gilman, R. B., Jersey City.
Gross, Herman, Metuchen.
Henriques, H. A., Morristown.
Hughes, M. D., Branchville.
Jones, R. R., Toms River.
Le Fevre, A. L., Blackwood.
Meyer, William, West Hoboken.
Morrison, Ephraim, Newton.
O'Reilly, E. R., Elizabeth.
Palm, H. F., Camden.
Pollard, J. E., Chatham.
Shepherd, I. M., Trenton.
Smith, L. H., East Orange.
Smith, T. J., Bridgeton.
Summerill, J. M., Penns Grove.
Swiney, M. A., Bayonne.
Twinch, S. A., Newark.
Walters, John, Wharton.
Welch, G. T., Passaic.

NEW MEXICO.

Clapp, F. R., E. Las Vegas.
Duncan, C. G., Socorro.
Northwood, A. E., Wagon Mound.
Osuna, Eligis, Albuquerque.

NEW YORK.

Allaben, C. S., Margaretville.
Ayres, Benj., Brooklyn.
Bacon, Gorham, New York.
Bardes, Albert, New York.
Baldwin, E. C., Rosebank.
Bartley, E. H., Brooklyn.
Bennett, E. C., Brooklyn.
Beaman, A. H., Long Island.
Bickerton, T. W., New York.
Bingham, Anne T., Hudson.
Bischop, L. F., New York.
Bogart, A. H., Brooklyn.
Bonnar, J. D., Buffalo.
Booth, J. W., West Colesville.
Born, R. O., New York.
Bowman, L. D., Jamestown.
Bozeman, N. G., New York.
Brandow, C. T., Moravia.
Brennglass, Joachim, New York.
Brittain, Robert, Downsville.
Brooks, G. F., New York.
Brown, R. H., Mt. Vernon.
Bruce, Hortense V., Hudson.
Bryant, F. A., New York.
Callie, Augustus, New York.
Carr, L. L., New York.
Carter, H. S., New York.
Cassola, Filippo, New York.
Cauldwell, C. M., New York.
Chambers, P. F., New York.
Chase, W. E., New York.
Clark, H. S., New York.
Cole, C. S., New York.
Cole, L. G., New York.
Collier, P. B., Kingston.
Costello, P. V., Brooklyn.
Cotton, Mary H., New York.
Craig, T. C., Brooklyn.
Crispell, C. W., Kingston.
Curtis, F. C., Albany.
Dadirrian, M. G., New York.
Dalley, L. J., Gloversville.
Danziger, Ernest, New York.
Davies, J. G. A., Oakland.
Davies, E. W., New York.
De Groat, H. K., Buffalo.
Dexter, T. H., Brooklyn.
Dodge, S. W., Massena.
Dorman, F. A., New York.
Dorning, John, New York.
Dudley, W. F., Brooklyn.
Duffield, W. L., Brooklyn.
Duryea, C. F., New York.
Edsall, I. S., Middleville.
Ellison, C. W., New York.
Ely, L. W., New York.
Emerson, J. B., New York.
Emery, Z. T., New York.
Fairbanks, J. R., Amsterdam.
Fanoni, Antonio, New York.
Ferris, Cleveland, New York.
Fitch, H. A., Utica.
Ford, C. M., New York.
Fosbury, L. D., Endicott.
Fox, G. H., New York.
Frissell, L. F., New York.
Fulton, Cynt., Lyons.
Furness, W. J., New York.
Galbraith, Anna M., New York.
Gannett, L. L. E., Adams.
Goodyear, M. D., Groton.
Grant, W. S., Brooklyn.
Grant, Gabriel, New York.
Green, T. J., Mexico.
Gregory, M. S., New York.
Gregor, G. D., Watertown.
Hague, E. M., Rochester.
Hand, Edward, New York.
Hanley, L. G., Buffalo.
Hammond, G. M., New York.
Harris, B. A., Morris.
Hart, A. J., New York.
Hendee, Lawrence, Buffalo.
Henderson, J. M., New York.
Hendrickson, Samuel, Jamaica.
Herzig, A. J., New York.
Herzog, A. W., New York.
Hettesheimer, C. J., Brooklyn.
Hickok, E. P., Brooklyn.
Hill, E. Y., New York.
Hills, A. T., New York.
Hodges, Edward, Brooklyn.
Holder, O. H., New York.
Huggins, W. L., Schenectady.
Hurd, A. W., Buffalo.
Jacoby, G. W., New York.
Jewett, H. F., Brooklyn.
Jewett, J. H., Canandaigua.
Johnson, W. H., New York.
Jones, C. N. D., New York.
Jones, I. C., New York.
Katzenbach, W. H., New York.
Keator, T. O., Accord.
Keely, John, New York.
Kell, P. A., Brooklyn.
Keune, Theodore, New York.
Killen, Jack, Binghamton.
Knapp, W. H., Binghamton.
Koller, Carl, New York.
Kramer, David, New York.
Kremer, Carl, New York.
Kroos, E. C., Brooklyn.
Lattin, F. H., Gaines.
Lauderdale, W. E., Geneseo.
Lawrence, R. G., Hammondsport.
L'Hommedieu, J. B., New York.
Lichtschein, Louis, New York.
Littell, E. G., Poughkeepsie.
Loewenthal, Philip, New York.
Lucus, T. D'Arcy, New York.
Ludlum, C. H., Hempstead.
Luhan, J. C., New York.
Maddren, Wm., Brooklyn.
Maisch, C. O., New York.
Mallit, Ovila, Troy.
Mann, H. J., Brockport.
McKenna, E. D., Albany.
McMaster, N. G., New York.
Mathews, F. S., New York.
McDowell, A. B., New York.
McMahon, J. J., New York.
Meding, C. B., New York.
Meyer, Adolf, New York.
Mial, L. L., New York.
Michaelis, L. M., New York.
Milbank, Samuel, New York.
Millington, W. F., Brooklyn.
Minar, E. G., Mannsville.
Moore, W. A., Binghamton.
Mundorff, G. T., New York.
Myers, C. L., Albany.
Newman, G. W., Brooklyn.
Olendorf, C. L., Cobleskill.
Owens, G. C., Brooklyn.
Patterson, H. S., New York.
Pomeroy, G. P. K., Stuyvesant.
Pool, E. H., New York.
Pooley, T. R., New York.
Powers, F. W., Ashville.
Port, C. D., Syracuse.
Prellwitz, O. E., New York.
Preston, J. C., Avon.
Purdy, W. H., Mt. Vernon.
Rankin, W. H., Brooklyn.
Rapp, Samuel, New York.
Raymond, Joseph, Schenectady.
Reshower, I. C., New York City.

Reynolds, W. G., Brooklyn.
Rice, J. F., Buffalo.
Richter, Wm., New York.
Robson, J. A., Halls Corners.
Rooth, H. C., Buffalo.
Rosenberg, Leopold, Bedford Sta.
Rosenheim, P. J., New York.
Rosenthal, Max, New York.
Rossman, G. W., Ancram.
Rostenberg, Adolph, New York.
Rundquist, E. A., New York.
Sands, B. J., Port Chester.
Satterlee, F. Le Roy, New York.
Schauf, Adam, Brooklyn.
Schley, W. S., New York.
Schnepel, G. A., New York.
Schroeder, Fredk., Jr., Brooklyn.
Schulmann, Henry, Brooklyn.
Sedgwick, W. N., New York.
Seimel, W. A., Brooklyn.
Severance, C. J., Mannsville.
Shanks, S. G., Albany.
Shattuck, W. S., Brooklyn.
Shaw, F. E. E., New York.
Shearer, L. H., New York.
Sherman, W. H., Yonkers.
Shipley, A. E., Brooklyn.
Shoemaker, Edwin, Newfane.
Simpson, W. K., New York.
Smith, C. P., Chester.
Smith, J. Gardner, New York.
Sturmdorff, Arnold, New York.
Stevens, Wm., New York.
Sweeny, T. T., New York.
Sweet, W. H., Petersburg.
Thomas, T. S., Cuba.
Thompson, J. E., Brooklyn.
Towne, G. Scott, Saratoga Spgs.
Tracy, E. Clark, New York.
Vanderzee, D. L., Industry.
Van Gaasbeek, G. H., Kingston.
Victor, E. W., Brooklyn.
Vose, R. M., Ithaca.
Vrooman, A. S., Kingston.
Walker, D. E., New York.
Walker, Emma E., New York.
Walker, H. F., New York.
Wallace, W. F., Rochester.
Wallian, S. S., New York.
Ward, R. F., New York.
Watson, H., D., Cincinnatus.
Weisbrod, Fredk., Brooklyn.
Wetmore, W. E., Utica.
White, J. B., New York.
Whitmore, J. E., Buffalo.
Wightman, O. S., New York.
Williams, H. T., New Rochelle.
Wittson, Albert J., New York.
Wilzin, I. M., New York.
Winship, F. A., Eagle Mills.
Wright, E. W., Brooklyn.
Writer, Theodore, Otisville.
Zemansky, A. P., New York.

NORTH CAROLINA.

Anderson, P. V., Morgantown.
Billings, A. E., No. Wilkesboro.
Coggeshall, G. A., Oxford.
Croom, A. B., Maxton.
Ferebee, E. B., Raleigh.
Flippin, J. M., Salisbury.
Freeman, W. G., Murfreesboro.
Harper, J. H., Snow Hill.
Hoggard, J. T., Burgaw.
King, P. M., Charlotte.
Koonce, S. E., Wilmington.
Lee, S. P. J., Dunn.
Lewis, R. H., Raleigh.
Monroe, W. A., Sanford.
Spruill, J. L., Columbia.
Whiteside, B. F., Hickory.
Williams, J. M., Warsaw.
Witherbee, W. D., Charlotte.
Wohlfarth, Justin, Asheville.

NORTH DAKOTA.

Davis, H. A., Dickinson.
McLean, R. M., Gilby.
Van de Erve, H., Pingree.
Widemeyer, J. P., Rolla.

OHIO.

Babione, A. A., Luckey.
Belt, J. H., Cleveland.
Brown, H. R., Chillicothe.
Burns, J. M., Mansfield.
Chapman, G. L., Toledo.
Cox, S. S., Lorain.
Coons, J. J., Columbus.
Coy, W. D., Canfield.
Cross, F. B., Cincinnati.
Duvall, G. W., Lynchburg.
Entrikin, F. B., Findley.
Finley, J. Early, Ironton.
Gorrell, C. V., Payne.
Grills, A. T., Loraine.
Harrod, C. L., Columbus.
Hathaway, Albert, Edon.
Hays, S. B., Newcomerstown.
Heavenrich, A. T., Cincinnati.
Hiller, Carl, Cincinnati.
Hoge, W. D., Rayland.
Hogue, W. L., Montpelier.
Housman, Z. T., Fostoria.
Klaus, Emanuel, Cleveland.
Knowlton, L. Y., Berea.
Lee, J. L., Akron.
Leet, W. H., Conneaut.
Lenker, J. N., Cleveland.
Letherman, O. J., Thornville.
Lyon, S. M., Ashtabula.
Mizer, T. J., Cleveland.
Mac Iver, Angus, Marysville.
Manley, R. M., Ravenna.
Marshall, G. M., Portsmouth.
Mignin, C. F., Stryker.
Murbach, E. A., Archibald.
Newberger, John, Cleveland.
Pontius, C. R., Fremont.
Roessly, G. R., Cincinnati.
Reid, C. B., Van Wert.
Rouse, J. D., St. Louisville.
Scott, W. S., Chillicothe.
Singleton, J. B., Cincinnati.
Syler, A. H., Sugar Creek.
Todd, George M., Toledo.
Watkins, C. D., Etna.
Weber, J. H., Akron.
Wiltshire, J. S., Gillespieville.

OKLAHOMA.

Ashley, Jerry, Chickasaw.
Bennett, D. W., Seatinel.
Cash, J. H., Glencoe.
Fowler, J. E., Altus.
Johnson, G. O., Fort Cobb.
Lehew, J. L., Pawnee.
Lynde, L. W., Okarche.
Newman, O. C., Grand.
Rhodes, T. A., Goltry.
Rose, W. L., Woodward.
Slover, G. W., Sulphur.
Smithe, P. A., Enid.
Tanner, W. E., Mayesville.
Taylor, A. H., Wellston.
Thomas, C. E., Weatherford.
Thompson, C. E., Kremlin.
Young, A. D., Oklahoma City.

OREGON.

Beauchamp, H. A., Stayton.
Botkin, O. F., Portland.
Hubbard, W. F., Portland.
Jefferds, H. C., Portland.
Raffety, Day., Portland.
Rogge, W. J., Portland.
Sellwood, J. J., Portland.
Whiting, Sanford, Portland.
Woodruff, W. G., Portland.

PENNSYLVANIA.

Anderson, W. Grant, Carbondale.
Appleman, L. F., Philadelphia.
Armstrong, W. N., Lock Haven.
Attix, J. C., Philadelphia.
Babcock, L. C., Bethlehem.
Bailey, T. W., Philadelphia.
Barkley, J. W., Ligonier.
Bell, E. H., Philadelphia.
Benson, J. P., Punxsutawney.
Bird, A. J., Overton.
Bleiler, P. O., Allentown.
Booher, J. C., Falls Creek.
Bower, C. L., Philadelphia.
Bradford, T. H., Philadelphia.
Branson, T. F., Rosemont.
Brown, J. D., Oaks
Burns, L. J., Philadelphia.
Bush, C. B., Orbisonia.
Cadbury, W. W., Philadelphia.
Cameron, W. H., Pittsburg.
Cathcart, W. B., Mt. Pleasant.
Chandlee, W. H., Philadelphia.
Cleveland, F. M., Philadelphia.
Cloud, M. H., Masontown.
Clover, C. L., Knox.
Coe, B. F., Dixonville.
Cogill, Lida S., Philadelphia.
Conant, Mary C., Warren.
Costello, M. J., Philadelphia.
Craney, J. P., Philadelphia.
Curry, G. E., Pittsburg.
Daggette, A. S., Pittsburg.
Dandors, G. F., Altoona.
Deal, J. C., Philadelphia.
Devitt, Wm., Philadelphia.
Dickinson, B. M., Pittsburg.
Dodd, W. L., Amity.
Drake, E. L., Philadelphia.
Dunn, Rose M., Franklin.
Eichman, E. A., Philadelphia.
Evans, D. E., New Castle.
Evans F. J., Chester.
Eves, C. C., George School.
Ewing, J. B., Uniontown.
Fager, J. H., Jr., Harrisburg.
Fetterman, W. B., Philadelphia.
Fry, H. M., Rush.
Fraser, H. D., Philadelphia.
Gile, B. C., Philadelphia.
Gittings, J. C., Philadelphia.
Gleason, E. B., Philadelphia.
Gormly, J. A., Meadows Lands.
Grim, G. M., Ottsville.
Groff, H. C., Philadelphia.
Grove, A. M., York.
Guthrie, D. C., Philadelphia.
Harris, F. D., Philadelphia.
Hatfield, G. W., Mt. Morris.
Hazlett, E. M., Washington.
Head, Joseph, Philadelphia.
Heard, J. C. F., North East.
Hearn, W. P., Philadelphia.
Herchelroth, J. G., Philadelphia.
Herrman, M. F., Philadelphia.
Hershey, G. B., Gap.
Hoffman, H. C., Connellsville.
Holloway, T. B., Philadelphia.
Hosmer, H. M., Philadelphia.
Hughes, W. E., Philadelphia.
Hurlock, F. I., Philadelphia.
Isenberg, J. L., Williamsburg.
Jackson, J. M., Stauffer.
Jarvis, C. C., Pittsburg.
Jefferson, James, Johnstown.
Jessop, C. J., Kittanning.
Kane, J. A. B., Philadelphia.
Keeler, J. C., Philadelphia.
Kelley, E. J., Chandlers Valley.
Kennedy, J. P., Columbia.
Kennedy, J. W., Philadelphia.
King, R. C., Hellertown.
King, W. H., Philadelphia.
Kirk, L. H., Oxford.
Knipe, J. C., Philadelphia.
Knotts, I. D., Davistown.
Krebs, A. B., Bolivar.
Langdon, H. Maxwell, Philadelphia.
Lavenson, R. S., Philadelphia.
Lewis, W. H., Donora.
Lloyd, J. H., Leonard.
Lopez, J. H., Philadelphia.
Lutz, H. L., Philadelphia.
MacCracken, G. Y., Philadelphia.
Maxwell, H. S., Clairton.
McAniff, H. P., Philadelphia.
McCormick, A. F., Fallscreek.
McDowell, N. S., Philadelphia.
McNaul C. G., Glen Richey.
McNeil, A. R., Corsica.
Meyers, M. K., Philadelphia.
Michener, E. W., Philadelphia.
Miller, A. G., Philadelphia.
Miller, L. O., Allegheny.
Milliken, D. B., Landisburg.
Monie, Thomas, Archbald.
Moore, J. A., Philadelphia.
Morrow, H. W., Swissvale.
Nevling, F. S., Clearfield.
NeuBerger, G. M., Wilkes Barre.
Nicholson, W. R., Philadelphia.
Osmond, Anna R., Philadelphia.
Peck, W. A., Scranton.
Pemberton, Ralph, Philadelphia.
Pennock, W. S., Philadelphia.
Pflueger, H. F., Philadelphia.
Phillips, Horace, Philadelphia.
Porch, E. H., Philadelphia.
Potter, Ellen C., Philadelphia.
Purman, John, Homestead.
Reese, F. G., Coudersport.
Rhoads, Samuel, Philadelphia.
Rickert, C. M., Harrisburg.
Roose, A. E., East Pittsburg.
Rugh, J. T., Philadelphia.
Runion, A. L., Canonsburg.
Santter, A. C., Philadelphia.
Sargent, A. A., Philadelphia.
Sayers, C. E., Hawthorn.
Schisler, Belle A., Philadelphia.
Schneideman, T. B., Philadelphia.
Sheldon, C. W., Kuneyville.
Shifferstein, E. E., Tamaqua.
Silvey, J. H., Sharpsburg.
Singer, J. J., Greensburg.
Smith, A. B., Wyoming.
Smith, H. H., Johnsonburg.
Smith, C. B., Newtown.
Smith, J. L., Philadelphia.
Speer, R. H., Vandergrift.
Stafford, A. M., Philadelphia.
Steinwandel, J. A., Philadelphia.
Stellwagen, T. C., Jr., Philadelphia.
Stiles, C. M., Philadelphia.
Stone, E. R., Philadelphia.
Swenk, C. H., Sunbury.
Sutliff, Dana, Shippensburg.
Taylor, A. J., Honbottom.
Thomas, C. H., Philadelphia.
Thomas, T. T., Philadelphia.
Tobey, E. A., New Bedford.
Todd, F. L., Allegheny.
Tomlinson, W. H., Philadelphia.
Ulrich, Katherine W., Chester.
Voorhees, C. D., Sonestown.
Wasley, H. M., Shenandoah.
Watt, Robert, Philadelphia.
Welty, E. M., Philadelphia.
White, F. W., Philadelphia.
Wiggins, E. H., Philadelphia.
Williams, W. L., Ridgeway.
Williams, T. V., New Castle.
Wilson, B. S., Clarion.
Wilson, J. D., Philadelphia.
Winsor, Henry, Ardmore.
Wood, Harold B., Philadelphia.
Wrigley, Arthur, Philadelphia.

RHODE ISLAND.

O'Connell, J. C., Providence.

SOUTH CAROLINA.

Bull, L. E., Cheraw.
Dulin, T. N., Clover.
Folk, J. L., Brunson.
Golden, J. Paul, Georgetown.
Hunter, B. W., Charleston.
Jones, W. T., Jones.
Kibler, J. M., Newberry.
Love, W. M., McConnellsville.
Marsh, R. A., Edgefield.
Moore, W. H., Kathwood.
Ransom, R. P., Williamstown.
Thompson, G. E., Inman.

SOUTH DAKOTA.

Dunham, W. O., Sioux Falls.
Freyberg, F. W., Mitchell.
Hess, F. W., Estelline.
Richards, G. H., Wessington Springs.

TENNESSEE.

Copeland, H. S., Palmerville.
Fyke, R. F., Springfield.
Goddard, W. L., Saulsbury.
Goodwin, J. L., Spring City.
Hale, G. W., Nashville.
Huffaker, R. O., Chuckey.
Jones, S. L., Knoxville.
Lancaster, A. J., Pulaski.
Luttrell, Walter, Knoxville.
Reagor, F. B., Shelbyville.
Ristine, C. E., Knoxville.
Stephens, J. B., Nashille.
Tate, R. W., Bolivar.
Toy, S. H., Hendersonville.
Tullos, A. M., Gadsden.
White, W. H. L., Knoxville.
Woodard, F. M., Springfield.
Wilson, J. C., Rockwood.
Wynne, J. W., Newbern.

TEXAS.

Barnes, C. V., Bedias.
Barnett, W. C., Big Springs.
Beverly, H. H., Smiley.
Brener, C. H., Yoakum.
Campbell, M. E., Stanton.
Carpenter, J. C., Kyle.
Clark, W. M., Floresville.
Connally, W. S., McGregor.
Collom, C. C., Mart.
Coston, G. M., Cranfills Gap.
Coston, T. C., Cranfills Gap.
Day, W. S., Caddo Mills.
Evans, J. M., Corpus Christi.
Foote, G. A., Eagle Lake.
Gatlin, E. N., Redwater.
Goddard, C. W., Holland.
Gooch, J. M., Temple.
Hargus, J. W. Cotulla.
Hughes, W. H., Del Rio.
Hunt, R. S., Rodger.
Irwin, A. W., Fair View.
Kincaid, Ada, Denta.
King, J. M. C., Merkel.
Krouse, Albert, Houston.
Leach, S. N., Sweetwater.
Marsh, B. C., Livingston.
McCardell, W. K., Livingston.
McCuistion, W. G., Paris.
McGee, J. R., New Boston.
Mickle, John W., Memphis.
McNeill, W. L., Arlington.
Newland, W. B., Gatesville.
Olive, N. A., Waco.
Pickett, W. S., Karnes City.
Reed, A. T., Honey Grove.
Schaefer, Marie C., Galveston.
Sims, G. W., Falls City.
Stinson, J. B., Sherman.
Sypert, J. R., Holland.
Thomas, W. S., Houston.
Thompson, T., Naples.
Vinsant, W. J., Pecas.
Wagner, S. V., Houston.
Watson, D. A., Schertz.
Webster, J. K., Athens.
Williams, M. L., Stanton.
Wilson, R. A., Douglas.
Wilson, H. C., Gilmer.
Wilson, J. W., Glory.
Wilson, R. A., Odessa.
Worsham, B. M., Austin.

UTAH.

Affleck, J. T., St. George.
Eghian, S. G., Ogden.

VERMONT.

Doane, C. B., Springfield.
Hopkins, H. D., Jericho Center.
Horner, J. S., West Pawlet.
Lindsay, Wm., Montpelier.
Marshall, G. G., Wallingford.
Rice, Thomas, Brattleboro.
Washburn, E. L., East Berkshire.

VIRGINIA.

Carr, R. P., Norton.
Cobb, E. C., Penola.
Cowardin, L. M., Richmond.
Doughtie, C. W., Norfolk.

Drewry, H. R., Norfolk.
Forline, H. H., Fredericksburg.
Gee, E. W., Richmond.
Graves, S. H., Norfolk.
Grizzard, J. A., Baykins.
Hopkins, E. G., Glen Allen.
Jacob, T. N., Dalby's P. O.
Mallet, J. W., Charlottesville.
Massie, C. W., Richmond.
Nottingham, C. L., Cape Charles.
Osterhous, Karl, Norfolk.
Payne, R. L., Sr., Norfolk.
Trent, J. P., Clinchport.
Pollard, J. B., Dorchester.
Rinker, C. F., Upperville.
Stephenson, H. W., Toano.
Sutton, S. A., Norfolk.
Walton, J. C., Chase City.

WASHINGTON.

Kunz, G. G. R., Tacoma.
McDonald, E. A., Seattle.
Parker, Maude, Seattle.
Reynolds, Annie E., Tacoma.

WEST VIRGINIA.

Boyd, J. R., Oakvale.
Campbell, H. M., Parkersburg.
Cox, T. B., Sherrard.
Davisson, Ithamar, Flemington.
Sparks, E. P., McKendree.
Hunter, J. R., Marting.
James, H. S., Putney.
Musgrave, D. E., Standard.
Offner, J. E., Corinth.
Price, S. W., Scarbro.
Robins, J. E., Charleston.
Vickers, R. E., Huntington.
Willis, E. Y., Montgomery.
Young, W. H., Bens Run.

WISCONSIN.

Andre, F. E., Kenosha.
Bothwell, D. F., Kingston.
Corr, John, Franksville.
Curtis, G. E., Eau Claire.
Gauvreau, E. T., Superior.
Jackson, F. A., Eldorado.
Jones, R. W., Sussex.
Law, W. G., Glidden.
Madison, J. D., Milwaukee.
Merritt, W. D., Janesville.
Reynolds, Bertha E., Lone Rock.
Riddle, M. Adeline, Oshkosh.
Riley, P. E., Elk Mound.
Wolf, H. E., La Crosse.

MISCELLANEOUS.

McConkey, W. F., Pala, T. of H.

Miscellany

The Ideal Medical Journal.—That veteran of the profession, Dr. Leartus Connor, states in the *Bulletin of the American Academy of Medicine*, what, from the reader's standpoint, a medical journal should contain. The subscriber who has in mind his own medical needs and the credit and welfare of his profession, demands first that the medical journal shall have something to say and say it without ambiguity or superfluity. Needless repetitions, rehashing of old facts, except so far as is necessary to show their relations to new ones, and crude and ill-digested contributions are not what are wanted. Next it should cover the ground and keep him in touch, not only with matters of local interest, but with the progress of medicine throughout the world, and it should be a stimulus to his medical perceptions, ideation and action. It should be free from any trace of malevolence or unfairness, from any taint of commercialism, and should everywhere and always work for the highest ideals and interests of the profession. The ideal medical journal should meet all these requirements and more. It should be an active educative influence at all times and in all ways, raising the medical standards and ideals of its readers. Medicine, to be a progressive science, not only in its accumulations of facts and theories, but also in its modes of thought, must keep pace with the advance of scientific thought in other lines. Inasmuch as it is nearer to the great secrets of mind and matter than any other department of science, it should be in the van of progress, not presumptuously, but recognizing its limitations, proving all things and holding fast only to that which is good. In all this the medical journal should be its faithful exponent. Always and everywhere the medical journal should cultivate the professional spirit, the "bushido" of the medical profession, which puts work before wage and safeguards against commercialism. Dr. Connor directly refers to this requisite when he designates as "unspeakable" those "whose sole object is immediate returns in money or reputation, irrespective of quality or quantity of service, and who care nothing for the honor of the profession." Lastly, the medical journal should be on the right side of all the great moral questions of the day in so far as they touch on its field, not fanatically or unreasonably, always respecting differences of opinion as to practical methods when such are worthy of respect, but never condoning nor supporting evil. Medical journals, while primarily not teachers of morals, incidentally must be. When questions of medical ethics or medical economics come up, then the ideal medical journal becomes a moral teacher in the broadest sense of the word. No medical journal can afford to be positively immoral, or what is nearly as bad, negatively unmoral, either in its editorial opinions or in its accepted contributions. There have been medical journals that have sinned in this respect; not only have unworthy causes been advocated, but the moral tone itself has been low. The shortcomings of medical journalism have been many, as Dr. Connor says, but we believe that the worst stage of its evolution in this country has been passed. With the higher standards of medical education and the consequent more rigid censorship and criticism, we may reasonably expect to see a better grade of literature than ever before. Some defects will always be unavoidable—perfection is never attainable in human affairs—but we may reasonably expect, to quote again from Dr. Connor, "that in the not distant future, medical journals will satisfy the wants of those more exacting than our subscriber."

The Organization of the Internes at Paris.—The internes of the Paris hospitals organized a few months ago for cooperation to obtain better scientific instruction and reform in other matters and for social purposes. They have accomplished wonders in their first two aims, and on May 4, they gave an evening entertainment to which all past and present internes and their families were invited. The prime minister, Clemenceau who was an interne once, himself, offered them the use of his spacious residence and ball rooms, and the evening was one of rare enjoyment among "old cronies" who had not met in some cases for years, but who came from long distances, many of them with "wife and daughter." Artists from the leading theaters contributed their services, but a poem by Dr. J. L. Faure, a dialogue between the young physician and the muse, seems to have been the gem of the evening. It is given in full in the *Presse Médicale* for May 11, about 100 lines. The muse asks who is this young man who seems so grave and careworn when he has youth and life and pleasure, sunshine, hope and love, and lives in France. The young physician replies telling of his daily round amid suffering, disease and death, the days of his youth fading sadly away like flowers on a grave. To this the muse replies with a beautiful idealization of the physician's career, passing through the sordid, money-getting crowd with the hands empty but the heart open, the pilot steering the ship through the breakers, the noblest rôle of all that are played on earth, correcting the work of nature, arresting the course of destiny, and triumphing over death. Dancing and cards rounded out the *Soirée de l'internat*. The program was ornamented with a modernized illustration of the story of the young Hippocrates refusing the gifts of Artaxerxes—a young physician, with his microscope, his books and his bistoury under his arm, fleeing from a seductive dancer, balanced on the wheel of fortune, who is scattering gold as she rolls along. The design was the work of one of the younger internes.

Pellagra.—Consul Clare at Bridgetown, Barbados, W. I., quotes a local practitioner as saying that this disease is very prevalent among the native negroes. Only whites of the poorer class are ever attacked. The first symptom is that described by the victim as an "inward burning." Pigmentation then occurs commencing at the elbows, knees and back of the hands, the parts soon appearing black and scaly. The alimentary canal then becomes ulcerated anywhere between the mouth and the anus, causing diarrhea and general emaciation. Pigmentation, ulceration and diarrhea are, it is stated, pathognomonic of pellagra. The prognosis is bad, the disease being fatal unless promptly treated. The physician quoted is of the opinion that the nervous system is always involved and that the disease is communicable.

Historical Medical Exhibition.—A fine collection of articles with historical interest in the line of medicine and pharmacology has recently been gathered in the *Kaiserin Friedrich-Haus* at Berlin and the exhibition was opened with much ceremony in April. E. Holländer was mainly instrumental in making the collection; he has already won a name for his works on medicine in art and the history of medicine. Some of the most interesting features of the exhibition are reproductions of an apothecary shop of two hundred years ago, a chemical laboratory, insane asylum, etc. There is also a representation in bas-relief of an operation for bladder stone performed on the Emperor Henry II of Germany, about 1,000 A. D. While the operation is being done by a Benedictine monk, who places in the reclining monarch's hand the large stone he has extracted, the king's body physician sits in mute resignation

with his back to the scene. The original cystoscope, the iron hand of Götz von Berlichingen, the clappers carried by lepers to warn people of their approach, and surgical instruments and orthopedic appliances of all ages are also on exhibition. It is proposed to make lantern slides of the various articles in the collection, to be loaned with a lantern wherever desired. Holländer appeals to physicians and their families to donate to the exhibition articles of all kinds bearing on the history of medicine in any way. They will be marked with the name of the donor.

Operative Treatment of Gangrene of the Lungs.—Lotheissen of Vienna demonstrated at a meeting of the local medical society, May 3, 2 patients with extensive gangrenous foci in the lungs on whom he had operated with success. He has operated for gangrene of the lungs in 19 cases during the last 4 years, the focus being as large as a fist or over in every instance. Lenhartz has operated in 60 cases during the last 7 years, but the foci were some of them much smaller than in any of Lotheissen's patients. In one of the latter's latest cases the patient was a woman of 33 who had recently passed through typhoid fever, abortion at the fourth month, and pneumonia. A gangrenous focus the size of one's fist was evacuated and tamponed after resection of ribs. Tubercle bacilli were found in the contents. A second focus required evacuation also a little later, but streptococci only were found in the pus. In the second patient the entire right lower lobe was gangrenous, and parts of the seventh to the tenth ribs were resected. The defect in the lungs healed over, although it proved impossible to fill out the cavity, but the patient's condition does not interfere with his work as a cabinet maker. He protects the parts with a zinc salve dressing. Lotheissen's mortality has been 40 per cent.; Lenhartz reported 37 per cent. In the Berlin hospitals, from 1897 to 1900, only 7 per cent. of the patients with gangrene of the lungs recovered. None of Lotheissen's mortality can be ascribed to the operation. It is always done under local anesthesia, and not until the focus has been certainly diagnosed and located.

Oxygen in Treatment of Suppurations.—A. Magi has been giving Thiriar's method of injecting oxygen a trial in septic affections and has become convinced of its great value. The surgeon has already adopted hydrogen dioxid, but the pure oxygen is free from the disadvantages of the water used in the solution of the latter, while it has all and more than its advantages. Magi describes his experiences in the *Policlinico*, xiv, 532, 1907. He used the oxygen first in a chronic suppurating fistula resulting from gaping of the wound after herniotomy. Oxygen was allowed to flow in and out of the fistula for four hours the first day, up to a maximum of fourteen hours by the fourth day. In less than two weeks the fistula had completely healed. The oxygen was also instrumental in rapidly healing a chronic suppuration in a suprapubic cystotomy wound, and also in the healing of the wound left from extirpation of a rectal cancer. Thiriar's announcement of the value of oxygen in septic affections, especially in gynecology, and his technic were summarized in the last volume of THE JOURNAL, page 1059, xlvii, 1906.

Crying as Sign of Syphilis in Infants.—Sisto and Gaing of Buenos Ayres relate a number of instances in which very young infants cried vigorously, constantly and persistently, and this was accepted by them as a sign of latent syphilis. This symptom appeared soon after birth, and they attribute it to pains in the bones and periosteum from irritation, similar to the pains in the bones of adults. As soon as systematic mercurial treatment was applied, the children ceased crying. In some cases it was the first and only sign of syphilis, but in others there were other signs or a suspicious family history. Filatow used to say that he had only to listen to an infant's cry to be able to exclude meningitis, pleuro-pneumonia and peritonitis, as with these the child's cry is rather a moan as it shrinks from the pain caused by deep inspirations, venous congestion and contraction of the abdominal walls. In colic and malarial neuralgia the child does not cry continuously. Their clinical experiences are related in the *Semana Med.*, xiv, 85, 1907.

Otitis Media in Infancy.—J. L. Morse, in the *Providence Medical Journal*, states that since there is so little characteristic about the symptomatology of otitis media in infancy, and since the symptoms are so misleading, this condition should be considered in every acute illness at this age and the ears examined. The only way to examine the ears satisfactorily, and to determine whether or not inflammation exists, is with a speculum. All other methods, he states, are incomplete and necessarily misleading.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

OHIO State Board of Medical Registration and Examination, Cleveland, Columbus and Cincinnati, June 10-12. Secretary, Dr. George H. Matson, Columbus.

SOUTH CAROLINA State Board of Medical Examiners, Columbia, June 11. Secretary, Dr. W. M. Lester, Columbia.

OKLAHOMA Board of Medical Examiners, Guthrie, June 11-12. Secretary, Dr. J. W. Baker, Enid.

KANSAS State Board of Medical Registration and Examination, Kansas City, Kansas, June 11-13. Secretary, Dr. F. P. Hatfield, Grenola.

IOWA State Board of Medical Examiners, Des Moines, June 11-13. Secretary, Dr. Louis A. Thomas, Des Moines.

MICHIGAN State Board of Registration in Medicine, Ann Arbor, June 11-13. Secretary, Dr. B. D. Harison, 205 Whitney Building, Detroit.

FLORIDA Homeopathic Board of Medical Examiners, Jacksonville, June 18. Secretary, Dr. C. W. Johnson, Jacksonville.

DELAWARE Board of Medical Examiners, Dover, June 18. Secretary of the Medical Council, Dr. P. W. Tomlinson, Wilmington.

DELAWARE Homeopathic Board of Medical Examiners, Wilmington, June 18. Secretary, Dr. C. M. Allmond, Wilmington.

NEW JERSEY State Board of Medical Examiners, State House, Trenton, June 18-19. Secretary, Dr. J. W. Bennett, Long Branch.

VIRGINIA State Medical Examining Board, Lynchburg, June 18-21 Secretary, Dr. R. S. Martin, Stuart.

WYOMING Board of Medical Examiners, State Capitol, Cheyenne, June 19. Secretary, Dr. S. B. Miller, Laramie.

MARYLAND Board of Medical Examiners, Baltimore, June 19-22. Secretary, Dr. J. McPherson Scott, Hagerstown.

PENNSYLVANIA State Board of Medical Examiners, 708 Locust Street, Philadelphia, and in Pittsburg Academy, Ross and Diamond Streets, Pittsburg, June 25-28. Secretary, Dr. Winters D. Hamaker, Meadville.

PENNSYLVANIA Homeopathic Board of Medical Examiners, N. W. Corner 15th and Cherry Streets, Philadelphia, June 25-28. Secretary, Dr. C. S. Middleton, 1523 Girard avenue, Philadelphia.

PENNSYLVANIA Eclectic Board of Medical Examiners, Harrisburg, June 25-28. Secretary, Dr. W. H. Blake, 2116 N. Marvine Street, Philadelphia.

TEXAS State Board of Medical Examiners, Austin, June 25-27. Secretary, Dr. T. T. Jackson, San Antonio.

Arkansas January Report.—Dr. F. T. Murphy, secretary of the State Medical Board of the Arkansas Medical Society, reports the written examination held at Little Rock, Jan. 8, 1907. The number of subjects examined in was 7; total number number of questions asked, 62; percentage required to pass, 75. The total number of candidates examined was 50, of whom 17 passed including 9 non-graduates, and 33 failed including 32 non-graduates. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Northwestern University	(1897)	75.
Illinois Med. Coll.	(1905)	75.1
Louisville Med. Coll.	(1904)	90.2
Missouri Med. Coll.	(1890)	75.
Meharry Med. Coll.	(1906)	75. 75.
University of the South	(1906)	75.
Beaumont Hosp. Med. Coll.	(1901)	85.4

LICENSED WITHOUT EXAMINATION.

There were also licensed at this examination six old practitioners who were granted license by reason of having been registered under old law. The following colleges were represented:

College.	Year of Grad.
Medical University of Ohio†	(1891)
Louisville Med. Coll.	(1883)
Memphis Hosp. Med. Coll.	(1894)
University of Nashville	(1861)
Gate City Med. Coll.	(1903)

FAILED.

College of P. and S., Dallas	*62.7

†A fraudulent institution.
*Year of graduation not given.

Illinois January Report.—Dr. J. A. Egan, secretary of the Illinois State Board of Health, reports the written examination held at Chicago, Jan. 16-18, 1907. The number of subjects examined in was 16; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 36, of whom 31 passed, 4 failed and 1 did not complete the examination. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Howard University, Washington	(1906)	80
Illinois Med. Coll.	(1907)	78, 84
National Med. University, Chicago	(1907)	79
Northwestern University	(1889) 79; (1904)	78
College of P. & S., Chicago	(1899) 79; (1905)	84, 86
Rush Med. Coll.	(1896) 81; (1903) 85; (1904) 85; (1906)	79, 83, 85, 86, 88, 90
Keokuk Med. Coll.	(1894)	83
Tufts Coll. Med. School	(1900)	79
Washington University, St. Louis	(1904)	80
College of P. & S., St. Louis	(1895) 81; (1906)	75
Cornell University	(1904)	82
College of P. & S., New York	(1905)	86
Jefferson Med. Coll.	(1900) 79; (1906)	76
Laval University, Quebec, Can.	(1896)	76
Imperial University, Kieff, Russia	(1896)	78
Royal University, Naples, Italy	(1905)	84
Royal University, Siena, Italy	(1898)	81

FAILED.

College.	Year Grad.	Per Cent.
Hahnemann Med. Coll., Chicago	(2, 1906)	..
Illinois Med. Coll.	(1906)	..
College of P. & S., Chicago	(1906)	..

Wisconsin January Report.—Dr. J. V. Stevens, secretary of the Wisconsin Board of Medical Examiners, reports the written examination held at Milwaukee, Jan. 8-10, 1907. The number of subjects examined in was 9; total number of questions asked, 100; percentage required to pass, 75. The total number of candidates examined was 18, of whom 13 passed, including 2 osteopaths, and 5 were conditioned, including 1 osteopath. Twenty-nine reciprocal licenses were granted at this examination. The following colleges were represented:

PASSED.

College.	Year Grad.	Per cent.
University of California	(1897)	80.
College of P. & S., Chicago	(1906)	87.
Rush Med. Coll.	(1904) 84; (1905)	82.
American Med. Miss. Coll	(1900)	85.
Northwestern University	(1895)	79.
University of Minnesota	(1904)	87.
University of Pennsylvania	(1904) 87; (1905)	89.
Jefferson Med. Coll.	(1906)	87.
Milwaukee Med. Coll.	(1906)	79.

CONDITIONED.*

College of P. & S., Chicago	(1906)	78.
Illinois Med. Coll.	(1906) 75.5; (1907)	77.7
Wisconsin College of P. & S.	(1906)	79.

LICENSED THROUGH RECIPROCITY.

College.	Year Grad.	Reciprocity with.
Am. Coll. of Med. & Surg., Chicago	(1905) (2, 1906)	Illinois.
Northwestern Univ.	(1900) (1903) (2, 1905) (1906)	Illinois.
Northwestern Univ. Woman's Med. School	(1899)	Illinois.
College of P. & S., Chicago	(2, 1905)	Illinois.
Hahnemann Med. Coll., Chicago	(1905)	Illinois.
Rush Med. Coll.	(1888) So. Dakota; (1894) (1902)	Minnesota.
Keokuk Med. Coll.	(1894)	Iowa.
University of Michigan	(1892) (1905)	Michigan.
Michigan Coll. of Med. & Surg.	(1882)	Iowa.
University of Minnesota	(1895) (1904)	Minnesota.
Barnes Med. Coll.	(1906)	Illinois.
Homeopathic Med. Coll. of Missouri	(1904)	Illinois.
St. Louis University	(1906)	Illinois.
Cincinnati Coll. of Med. & Surg.	(1901)	Ohio.
Royal University of Turin, Italy	(1895)	Michigan.
Trinity Med. Coll., Ontario	(1883)	Michigan.
Toronto School of Medicine, Ontario	(1899)	Illinois.
Frederick Alexanders University, Erlangen, Germany	(1869)	Kansas.

*Fell below 60 per cent. in one or more subjects.

Kentucky April Report.—Dr. J. N. McCormack, secretary of the State Board of Health of Kentucky, reports the written examination held at Louisville, April 23-24, 1907. The number of subjects examined in was 11; percentage required to pass, 70 and not less than 60 in any branch. The total number of candidates examined was 9, of whom 5 passed and 4 failed, including 2 osteopaths. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Hospital Coll. of Medicine, Louisville	(1902)	75.7
Johns Hopkins Med. School	(1905) 82; (1906)	78.4
University of Michigan	(1904)	89.1
Miami Med. Coll.	(1906)	86.5

FAILED.

University of Nashville	(1903)	40.6
Meharry Med. Coll.	(1907)	63.4

Montana April Report.—Dr. W. C. Riddell, secretary of the Board of Medical Examiners of Montana, reports the written examination held at Helena, April 2-4, 1907. The number of subjects examined in was 10; total number of questions asked, 50; percentage required to pass, 75. The total number of candidates examined was 25, of whom 20 passed and 5 failed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Chicago Homeo. Med. Coll.	(1904)	84.4
College of P. and S., Chicago	(1903)	87.7
American Med. Miss. Coll.	(1903) 82.9; (1905)	76.5
Rush Med. Coll.	(1898)	84.3
Northwestern University	(1906)	75.5
University of Maryland	(1901)	76.2
College of P. and S., Baltimore	(1891)	75.
Detroit College of Med.	(1904)	76.7
University of Minnesota	(1904) 75, 81; (1905)	82.3
Minneapolis Coll. of P. and S.	(1897)	75.
Missouri Med. Coll.	(1884) 75.7; (1898)	79.6
Beaumont Hosp. Med Coll.	(1905)	75.
Creighton Med. Coll.	(1906)	75.6
Jefferson Med. Coll.	(1905) 82, 89.1; (1906)	77.6

FAILED.

Hahnemann Med. Coll., Chicago	(1905)	65.3
Louisville Med. Coll.	(1904)	65.8
Marion Sims Coll. of Med., St. Louis	(1895)	62.4
Albany Med. Coll.	(1899)	72.2
Laval University, Quebec	(1902)	52.8

Rhode Island April Report.—Dr. Gardner T. Swarts, secretary of the Rhode Island State Board of Health, reports the written examination held at Providence, April 4-5, 1907. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. Total number of candidates examined was 9, of whom 3 passed and 6 failed, including 2 non-graduates. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
College of P. and S., Boston	(1906)	75.1
Boston University	(1907)	84.2
Queen's College, Ireland	(1892)	76.3

FAILED.

Baltimore University	(1904) 61.9; (1906)	64.4
Laval University, Quebec	(1905)	62.6, 65.

West Virginia April Report.—Dr. H. A. Barbee, secretary of the West Virginia State Board of Health, reports the written and oral examination held at Wheeling, April 9-11, 1907. The number of subjects examined in was 9; total number of questions asked, 120; percentage required to pass, 80. The total number of candidates examined was 9, of whom 6 passed and 3 failed. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
Kentucky School of Med.	(1906)	82, 88.
Hospital College of Medicine, Louisville	(1906)	93.
Western Pennsylvania Med. Coll.	(1906)	95.
Jefferson Med. Coll.	(1906)	90.
Chattanooga Med. Coll.	(1906)	87.

FAILED.

Kentucky School of Med	(1905)*
Baltimore University	(1900)*
Medical Coll. of Virginia	(1906)*

*Percentage not given.

Utah April Report.—Dr. R. W. Fisher, secretary of the State Board of Medical Examiners, reports the written examination held at Salt Lake City, April 1, 1907. The number of subjects examined in was 14; percentage required to pass, 75. The total number of candidates examined was 7, all of whom passed. The following colleges were represented:

PASSED.

College.	Year of Graduation.	Anatomy.	Surgery.	Histology, Med. Jurisprudence & Bacteriology.	Chemistry.	Materia Medica.	Obstetrics and Gynecology.	Pathology, Practice and Pediatrics.	Physiology and Hygiene.	Average.
Colo. Sch. of Med.	(1904)	86	77	77	85	90	87	92	90	85.5
Geo. Washn. Univ.	(1906)	92	85	87	100	85	88	86	90	89.
Coll. of P.&S., Chi.	(1906)	87	78	66	85	75	80	90	75	79.5
Univ. of Mich.	(1906)	90	88	76	85	85	85	88	100	87.1
Hahn. M. C., K. C.	(1901)	70	75	81	75	84	65	95	75	77.5
K. C. Homeo. M. C.	(1896)	88	80	81	75	95	85	91	85	85.
Dartmouth M. Coll.	(1880)	85	76	74	60	90	85	85	75	78.7

Book Notices

TROPICAL MEDICINE, with Special Reference to the West Indies, Central America, Hawaii and the Philippines, Including a General Consideration of Tropical Hygiene. By T. W. Jackson, M.D., Lecturer on Tropical Medicine, Jefferson Medical College, Philadelphia. Cloth. Pp. 536. Price, $4.00 net. Philadelphia: P. Blakiston's Son & Co., 1907.

Especial attention is given in this book, which we believe is the first American book on the subject, to the diseases peculiar to the tropical lands under the flag of the United States. Credit is given to American physicians for the large amount of work which they have done in studying them. The subject of tropical medicine is of interest to all physicians who wish to keep abreast of the progress of medicine, for it is in this field that many of the most recent and most interesting discoveries have been made. Moreover, it is of interest, for certain of these diseases are likely at any time to be brought to our own shores and those living in the large seaports must be on the watch for such importations. Even in the center of our continent we have seen several of these, to us, rare diseases, among sailors, soldiers and the families of missionaries. The first chapter is devoted to personal hygiene and measures for preventing infection. The first of the diseases considered is cholera. This, though not confined to the tropics, finds its most permanent home in tropical Asia and the islands of the Pacific. The subject is considered in detail, but is made more interesting by contributions from the author's own experience. He tells how the disease was first brought to his station thirty miles from Manila by natives constituting the crew of a boat which brought forage for the government animals. Two deaths occurred in this boat while at anchor in the bay; however, by destroying the bodies of the dead and by careful supervision of those exposed to the disease, it was kept from spreading. The author, when discussing immunization against cholera, relates his experience while on the transport Sherman at Nagasaki, Japan. The ship was bringing to this country Americans, mostly soldiers, who were invalids, many of them suffering severely from chronic illness. Among them cholera appeared when about forty-eight hours from Nagasaki. Ten cases developed, all of the patients contracting the disease on shipboard. Eighty-five persons received immunizing inoculations and none of them contracted the disease. At the end of this chapter, as at the end of most of the others devoted to the consideration of a disease, several pages are given to a description of laboratory methods of detecting and identifying the causative organism.

It is impossible to consider in this review each chapter, or even the most important. Thirty-five pages are filled with an interesting description of plague. Tropical dysentery is one of the diseases to a knowledge of which American physicians have contributed much, and full credit is given them, though our indebtedness to Lamble and Lösch and other Europeans is fully acknowledged. Emphasis is laid on the existence of afebrile malaria. That it does exist is overlooked or forgotten by most practitioners. As a matter of fact the disease often pursues an afebrile course or is latent. This must be remembered if we are to check its spread. Yellow fever interests practitioners in the United States almost as much as does malaria. The book brings together the dissociated knowledge regarding this disease which has appeared in current medical literature during the last two decades. The second part is devoted to animal parasites such as ankylostoma, filariasis, trypanosomes, bilharzia and intestinal and liver worms. Part three is something of a hodge-podge and includes what the author calls undetermined diseases or those of uncertain origin. A few of the diseases included in this part might better appear in an earlier one, as for instance febrile tropic splenomegaly or dumdum fever, the cause of which is sufficiently established. A classification, which makes a scrap basket into which are dropped various essentially unrelated diseases, is not satisfactory.

The book contains numerous illustrations, almost all of which are new and fairly satisfactory. Many are reproductions of photographs and while interesting are lacking in that technical perfection which a better photographer might have given them. The book is clearly and simply written and is interesting, and its teaching is practical.

A MANUAL OF DISEASES OF THE NOSE, THROAT AND EAR. By E. B. Gleason, M.D., LL.D., Clinical Professor of Otology in the Medico-Chirurgical College, etc. Illustrated. Leather. Pp. 556. Price, $2.50 net. Philadelphia and London: W. B. Saunders Co., 1907.

This is a desirable handbook of diseases of the nose, throat and ear, for the use of students and practitioners. In order that the student may have the necessary information at hand the essentials of anatomy are included. The various methods of examination are described and particular attention is given to the descriptions of the manipulations needed in local treatment including the minor operations. Special attention is given to treatment, the directions for which are explicit and detailed, the methods being simplified as much as possible only those being advised which have proved, in the author's experience, essential to the accomplishment of the desired result. The book is illustrated by 262 engravings, a considerable proportion being original or drawn from dissections made by the author.

It is to be regretted that one meets in the text and especially in the collection of formulas at the end, reference to a considerable number of proprietary remedies, some of which are of the typical nostrum order. An ingenious excuse is given for the use of such proprietaries in place of such official preparations as Dobell's solution: "Both Dobell's solution and the wash should be compounded at least three or four days before being used. For this reason it is sometimes convenient to prescribe one of the following proprietary preparations." A poor excuse—any competent pharmacist can make Dobell's solution, and keep it in stock, or he can obtain it from any wholesale drug house.

We are prepared to overlook the occasional reference to proprietary remedies by a clinical teacher, if he knows of nothing beter, for in impromptu speaking, they have no time to consult standard works, but for a college professor and the writer of a text-book deliberately to introduce into his book recommendations of remedies of whose composition he has no accurate knowledge seems to amount to a confession of incompetency to deal with the subject undertaken. The recommendation of such nostrums as listerine, glycothymoline, thymozone, euzone lignol, balsamol, respirol, etc., in what is intended to be a standard text-book is certainly deplorable.

TEXT-BOOK OF PSYCHIATRY. A Psychologic Study of Insanity for Practitioners and Students. By Dr. E. Mendel, A. O. Professor in the University of Berlin. Authorized Translation Edited and Enlarged by William C. Krauss, M.D., Buffalo, N. Y., Neurologist to Buffalo General Hospital. Cloth. Pp. 311. Price, $2.00 net. Philadelphia: F. A. Davis Company, 1907.

This translation of Professor Mendel's work on insanity is a welcome addition to our rapidly growing literature on the subject. The author has long held a high rank and his views carry weight. The plan of the work fits it to be a student's handbook for the clinics, to enable him to interpret what he can observe in actual experience in his studies of insanity. Professor Mendel does not follow in all respects the views of the predominant German school of the day, but his conservatism is based on experience, and we do not think it altogether a drawback to the usefulness of the work. His classification of the psychoses may not be wholly free from objection, but it will enable the physician to diagnose most cases and to obtain a somewhat better understanding of the clinical significance of isolated cases. He thinks that the rather too comprehensive groupings of the present day tend to a slovenly method of study and diagnosis.

As might be expected, the larger portion of Professor Mendel's text-book is devoted to the general subject of insanity and somewhat less than half to the special forms, their characteristics, treatment, etc. In this first portion the symptomatology, both the psychic and physical, is very thoroughly handled, especially the former. Some of the matter here has been added by the translator, on the whole to the enhancement of the value of the work. The subjects are concisely treated throughout. The special part of the work contains brief but good descriptions of the various forms of mental disease, much having been already given in the general section on symptomatology, treatment, etc. A few points may be specially noted. Professor Mendel credits at least 1 per cent. of all cases of insanity directly to alcohol—a considerably higher figure than is usually accepted in this

country, though the importance of alcohol as an accessory factor is generally recognized. His recommendation of a dose of 3, 4 or 5 grams of chloral seems to us a little large, even in acute alcoholism.

Dr. Krauss, the translator, has given us a very good English rendering of the German text, and added to its value by his numerous well-chosen additions, which are indicated by brackets. We should be inclined to look for a considerable popularity of the translation as a text-book on insanity in this country.

SURGICAL DIAGNOSIS, by Daniel N. Eisendrath, A.B., M.D., Adjunct Professor of Surgery in the Medical Department of the University of Illinois, College of Physicians and Surgeons. Illustrated, partly in colors. Cloth. Pp. 776. Price, $6.50 net. Philadelphia and London: W. B. Saunders Co., 1907.

On examination of this work one is immediately impressed with the abundance of illustrations; there are pictures to illustrate almost every possible method and phase of surgical diagnosis and condition. The fact that some of the pictures are introduced simply to show the position of the patient and physician in certain examinations indicates a characteristic feature of the book, viz., the minute attention to detail. For such a book this is commendable. Not only is the student told what to do, but an attempt is made to show him just how to do it. The arrangement of the various affections is a clinical one, the injuries of the various regions being taken in order, beginning with the head and ending with the extremities, after which diseases and injuries of the spine are considered. A chapter on postoperative complications is added and the book closes with a chapter on methods of examination which includes examination of the blood and some of the newer methods of testing the renal functions. These subjects have been separately treated by others; that on the blood by Dr. D. L. Schram, and the section on cryoscopy, etc., by Dr. Gustav Kolischer. Throughout, the arrangement of the topics is systematic and the variation of type and the introduction of numerous tables serve to bring the distinguishing marks of the various conditions clearly before the reader. The book will be found of great practical value even to those who are not doing surgical work. In fact, these will find it of as much, if not more, value than will the specialist in surgery. Much of value in a book is often lost because it is hidden away. Such loss is avoided by a complete index. In this book the index is very complete, occupying twenty-six pages. The work is to be commended in that it presents in a complete and practical way a subject that is too much neglected in the general text-book on surgery.

IMMEDIATE CARE OF THE INJURED. By A. S. Morrow, A.B., M.D., Attending Surgeon to the Workhouse Hospital, and to the New York City Home for the Aged and Infirm. Fully illustrated. Cloth. Pp. 340. Price, $2.50 net. Philadelphia: W. B. Saunders Company, 1906.

According to the preface an endeavor has been made "to prepare a book that would be useful alike to physicians, nurses and laymen, and at the same time serve as a text-book for the use of first-aid classes." Part I gives an outline of human anatomy and physiology well adapted to the educational needs of nurses and the laity. Part II, devoted to bandages, dressings and disinfection discusses these subjects in a style quite too technical for the layman, but useful as a reminder to the interne or general practitioner. Part III, the practical section of the volume, is clearly written and covers well the subject of the immediate care of cases of accident, injury or poisoning. The methods of lifting and transporting sick or injured persons are well set forth in the concluding chapter. Although a large amount of useful information is to be found in this book we think it hardly comes up to the ideal set forth in the preface, inasmuch as the author has failed to make clear what may be done by the intelligent layman in cases of accident or injury, and what in such cases should be undertaken only by the physician.

ESSAYS IN PASTORAL MEDICINE. By A. O'Malley, M.D., Ph.D., LL.D., Pathologist and Ophthalmologist to Saint Agnes' Hospital, Philadelphia, and J. J. Walsh, M.D., Ph.D., LL.D., Adjunct Professor of Medicine at the New York Polyclinic School for Graduates in Medicine, etc. Cloth. Pp. 363. Price, $2.50, net. New York: Longmans, Green & Co. 1906.

The field of this work comprises the moral relations of various medical conditions that may arise in the practice of the physician, such as sudden death, infectious diseases, premature labor, ectopic gestation and mental disease. Many of the points discussed are of special interest to Catholic physicians and those who deal with Catholic patients, for example, baptism of the fetus in operating for extrauterine pregnancy. On some of these points there is not a great deal written, and whether or not the reader agrees with the authors in all points, he will appreciate this compilation of essays and be glad of the full discussion here presented.

PRACTITIONER'S HANDBOOK OF MATERIA MEDICA AND THERAPEUTICS. Based on Physiologic Actions and the Indications in Small Doses, to Which Is Added Some Pharmaceutical Data. By Thos. S. Blair, M.D., Member Visiting Staff of Harrisburg City Hospital, etc. Cloth. Pp. 253. Price, $2.00 net. Philadelphia: The Medical Council.

The practical physician may wish to know what valuable facts are hidden in the mass of observations of so-called sectarian medicine and may wonder whether or not—by confining himself to his "regular" reading—he is missing something which he ought to know for the good of himself and his patrons. To such a one the reading of this book must be a satisfaction. The author has explored the sectarian fields with no unfriendly spirit and has made of his findings a sort of composite therapeutics by taking what he considers good from each school.

A MANUAL OF MIDWIFERY. By Thomas Watts Eden, M.D., C.M., Edin., F.R.C.P., Assistant Obstetric Physician and Lecturer on Practical Midwifery, Charing Cross Hospital, etc. With 26 Plates and 233 Illustrations in the Text. Cloth. Pp. 518. Price, $4.20. Philadelphia: P. Blakiston's Son & Co., 1906.

The author has given due consideration to those subjects which are of practical value to the obstetrician and omitted non-essential and collateral subjects. The manual is not intended for specialists, but for students and general practitioners. The work has been well done, recent advances in the study of ovum development, the pathology of pregnancy and the management of labor being incorporated.

THIS LABYRINTHINE LIFE. A Tale of the Arizona Desert. By George Alexander Fischer, author of Beethoven: A Character Study. Cloth. Pp. 382. Price, $1.20. New York: B. W. Dodge & Co.; Chicago: A. C. McClurg & Co., 1907.

Any work intended to help in the prevention or cure of a disease which so ravages the world as does tuberculosis should be welcome, but this book has little literary merit to commend it. It is an alleged novel, the scene of which is in Arizona, in the colony of consumptives, and the questions of the fresh air and desert treatment are sandwiched in between the ordinary stories of western life, made familiar to the world by Bret Harte and others.

MEDICAL DIAGNOSIS. A Manual of Clinical Methods for Practitioners and Students. Fifth Edition. Enlarged and Revised., by J. J. Graham Brown, M.D., F.R.C.P.E., F.R.S.E., Assistant Physician, Royal Infirmary of Edinburgh, and W. T. Ritchie, M.D., F.R.C.P.E., F.R.S.E., Clinical Assistant Pathologist, Royal Infirmary of Edinburgh, with 200 Illustrations Cloth. Pp. 508. Price, $3.00. New York: Imperial Publishing Company, Edinburgh and London: William Green & Sons, 1907.

This handy volume contains a succinct, accurate and reasonably complete account of the methods of clinical diagnosis. The present edition has been revised and considerable additions made. The work is well illustrated.

A TEXT-BOOK OF OBSTETRICS. By B. C. Hirst, M.D., Professor of Obstetrics in the University of Pennsylvania, etc. Fifth edition, revised and enlarged. Cloth. Pp. 915. Price, $5.00 net. Philadelphia: W. B. Saunders Company, 1906.

The fifth edition of Professor Hirst's popular text-book has been revised in accordance with the latest advances in obstetric science. It still retains the clear and concise style and practical character which make it so valuable to the medical student and practitioner.

MINOR AND OPERATIVE SURGERY, INCLUDING BANDAGING. By H. R. Wharton, M.D. Sixth Edition, with 532 Illustrations. Cloth. Pp. 650. Price, $3.00 net. Philadelphia: Lea Bros. & Co., 1905.

For this sixth edition the text has been reviewed in accord with the advance of surgery, and the book includes all except distinctively capital surgery. The descriptions are concise, the illustrations clear.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, CONTRACT PRACTICE, INSURANCE FEES, MEDICAL LEGISLATION, ETC.

The Physician and the Association, as Seen by the Country Doctor.

Under the above heading, Dr. J. B. Norman, California, Mo., discussed several interesting questions before the Moniteau County Medical Society. Dr. Norman said in part:

Each member should strive to raise the standard of ethics to such a plane that it may be apparent to every intelligent layman. I have not advertised my cures in the lay press, but what have I said to that man or this woman that has led him or her to believe in my superior ability and to discount the professional skill of my competitors? Was it strictly true? Was it ethical? Was it manly? Was the last case as bad as I represented it to be? Was the last recovery as marvelous as I led the patient to believe? Have I fostered ignorant superstitions and traditions to conceal my own ignorance or to enhance the greatness of my cures? Have I pretended to do more with my instruments and appliances than I know can be done? Have I given my money or my influence to push the sale of any nostrum? Have I taken a patient from a colleague? Have I, by word or deed, discredited the diagnosis, treatment or professional skill of any reputable physician? Have I bid for the business of my associates by making lower charges or by offering to make lower charges than they?

THE MEDICAL JOURNAL.

After asking these pertinent questions, Dr. Norman takes up the matter of journals. He says:

It seems strange that physicians will continue to be gulled by a certain journal published in this state whose chief object of existence is to promote the sale of the various proprietary preparations and nostrums in which the editor of the journal has a material interest. So palpably does this appear in its pages that we can only wonder at the gullibility of man. What is true of this particular journal is true in a lesser degree of all trade journals. As a profession, we have it in our power to banish from all medical journals and from many lay journals and papers the obnoxious proprietary, "patent medicine" and fake cure advertisements.

THE CITY PHYSICIAN VS. THE COUNTRY PHYSICIAN.

On questions relating to the interior affairs of the organization, Dr. Norman has equally positive views and expresses them with the same forcefulness. Regarding the relative influence of the country and the city physician in the state association, he says:

The city physician, who in almost all cases is a specialist [This is hardly true; perhaps Dr. Norman means that the city physician who habitually attends the state meetings is frequently a specialist] looks to the country doctor for a large percentage of his cases. He reads a learned paper on some abstruse and unheard-of subject, designed to impress his hearers with his deep erudition, vast experience and peerless skill. He patronizingly shakes the hand of the country doctors whom he meets, and when some general practitioner reads a paper on typhoid fever or some equally vulgar subject, he very kindly walks out into the hall and smokes a cigar or holds a conversation with some friend in the rear of the audience. To him, the annual meeting is a seed time, and he does not fail to attend and read his paper. The country doctor, less polished but often more resourceful, who has successfully fought the battle alone, can teach us many things that the city physician with all his polish knows not of. If our association is to be a real state association there ought to be and there must be a larger percentage of country doctors on the program of our annual meeting. When we cease to worship the city physician as a human God, because he is from the city, and cease to regard the country physician as a fool, because he is from the country, we will be in a fair way to a more perfect organization.

Dr. McCormack's Work in Alabama.

In an editorial in the February number of the *Mobile Medical and Surgical Journal* is the following endorsement of Dr. McCormack and his work in Alabama:

"The recent visit of Dr. J. N. McCormack to Alabama and his conferences with the profession are likely to result in great benefit to organized medicine in reviving the *esprit du corps* and in creating correct conceptions as to the value of effective organization. His addresses to the laity were felicitous and made a pronounced impression on all who were fortunate enough to hear him. His exceptionally enthusiastic feeling made a deep impression and opened the eyes of many who had previously given the subject but passing thought. The work to which he has devoted himself is a great and admirable one and should receive the endorsement and active cooperation of every member of the profession. His advocacy of the establishment by each county society of a postgraduate course of study met with ready endorsement by the societies before which he spoke. If carried out in an intelligent manner there can be no doubt that such a plan will greatly increase the interest in society work. There has heretofore been too much adherence to the belief that the functions of the county medical societies in Alabama are entirely legal, hence scientific work has been subordinated. Now, however, in accordance with Dr. McCormack's recommendations, they can be made a power for good in advancing professional and scientific attainments for their members."

Insurance.

MASSACHUSETTS.

The Essex North District Medical Society at its meeting, held in Lawrence, May 1, adopted the Kentucky resolutions, each of its members agreeing not to make insurance examinations for less than $5.

WEST VIRGINIA.

The Barbour-Randolph-Tucker County Medical Society has requested all physicians within the district to refuse to make examinations for old-line companies for less than $5. The action of the society is advisory and not mandatory, but the society strongly recommends that members adhere to this agreement.

MARYLAND.

At the January meeting of the Baltimore County Medical Society a resolution was adopted rejecting the proposed reduction of life insurance examination fees and asking for an expression of opinion from the physicians of the county on this point. At the May meeting of the society a committee, appointed to consider the matter, made the following report: A letter and postal card setting forth the decision of the society was sent to 105 members of the medical profession in Baltimore County. Replies have been received from 82 physicians, all of whom heartily endorse the action of the society. The committee recommends that its report, together with a copy of the circular letter, be sent to each of the medical societies of the state, also to the medical directors of each of the insurance companies which have reduced their examination fees.

MISSOURI.

At the last regular meeting of the Moberly County Medical Society this organization, which is composed of all the practicing physicians in the city, adopted resolutions providing that in the future 50 cents will be charged for an inspection of candidates seeking insurance in the Prudential and Metropolitan insurance companies. Heretofore the maximum rate has been 25 cents. The Moberly physicians can certainly not be accused of extortion in making this demand.

IOWA.

Dr. C. A. Boice, councilor of the first district of the State Medical Society, reports that six of the seven counties in his district, namely, Lee, Henry, Jefferson, Washington, Des Moines and Van Buren, have adopted the Kentucky resolutions regarding life insurance fees and have also requested the Iowa State Medical Society to take action in the matter.

RHODE ISLAND.

Some time ago attention was called to the action of the Westerly Physicians' Association and the adoption of resolutions regarding lodge and contract practice. A letter recently received from Dr. W. A. Hillard, the secretary, says: "At the time these resolutions were adopted there were 14 physicians

located in Westerly. Each one of them signed the resolutions. This action went into effect April 1, 1907. Since that time no lodge or contract work has been done in Westerly. No physician has broken his agreement."

The Parents' League.

Hoeflmayr writes to the *Deutsche med. Wochschr.* describing the organization of a new society at Munich. Its object is to promote the cooperation of the parents and physicians with the school authorities for the solving of many problems of hygiene and psychology of importance to school children. One of the aims of the society is to have one or more representatives of the parents on the board of education; another is to enlighten parents on questions involving the welfare of their children. Hoeflmayr remarks that the theoretical ideals of the medical societies can in time be realized in practice by cooperation such as is offered by this organization. The successful realization of these ideals in daily life will earn for the profession the gratitude of ever widening circles. He adds in conclusion: "The time has passed for physicians to work in silence and in modest retirement. It has become now an imperative necessity for the physician to take part in sociopolitical affairs, maintaining always his peculiar position among the other professions and callings on account of his scientific training. If the physician, besides all this, takes an active part in the improvement of the methods of educating and training the young, and makes his influence felt in this most important of all domains, he will have made notable progress toward becoming what he should be, the leader and guide of the people." The Parents' League was founded by a prominent physician and was warmly welcomed by the better class of parents and endorsed by the press, both in Munich and elsewhere.

Preliminary Education of Nurses—and Physicians.

The North Carolina legislature has passed an act providing for the examination and registration of trained nurses. An examining board is established to examine all applicants of good moral character, who are more than twenty-one years of age, who have received the equivalent of a high-school education and who have graduated from a training school connected with a general hospital or sanitarium where three years training in nursing is given. Examinations are held on the elements of anatomy, physiology and materia medica and also on medical, surgical, obstetric and practical nursing, invalid cookery and hygiene. The board is empowered to issue a license without examination if it deems it advisable.

The *Charlotte Medical Journal*, commenting on this bill and on the refusal of the state legislature to pass the medical practice bill asked for by the profession of the state, says:

As a sample of stupendous inconsistency, we have rarely seen anything that approaches the attitude of the legislature toward two professions so closely allied. The senate bill to raise the standard of preliminary qualifications of medical applicants required that those who desire to obtain a license to practice medicine in this state should have received the equivalent of a high school education, yet the rulers of our commonwealth oppose a law which will give them better doctors while they pass a bill requiring nurses to be more highly educated than physicians.

Quacks Organize.

The Independent Medical Association is the latest. It includes the advertising specialists whose medical advertisements have been eliminated from the New York newspapers through the efforts of the New York County Medical Society. The members of this association state that their object is the "protection and preservation of their inalienable right to the freedom of the press." It is further stated that "to defray expenses which would be incurred by fighting such legislation, membership dues are fixed at $10 per year." The last statement is noteworthy. If membership in such an association, organized for such purposes, is considered worth $10 a year to the members, how much ought membership to be worth in his county, state and national association, with all that it means and brings, to the honorable and ethical physician?

Marriages

PETER A. JORDAN, M.D. to Miss Ida Beermaker, both of San José, Cal., May 20.

HENRY DWIGHT CHAPIN, M.D., New York City, to Miss Alice Delafield of Chicago, June 1.

JOHN D. GARRETT, M.D. Indianapolis, Ind., to Miss Mary Pierson of Spencer, Ind., June 4.

A. WARNER SHEPARD, M.D., to Miss Mary Sniffen Myers, both of Brooklyn, N. Y., May 29.

FENTON L. ADAMS, M.D., Vanceburg, Ky., to Miss Evelyn Crady of Nelsonville, Ky., May 22.

EDWARD T. JAYNES, M.D., New Hartford, Iowa, to Miss Mabel Ferguson, at New Hartford, May 19.

ROBERT BENNETT BEAN, M.D., Ann Arbor, Mich., to Miss Adelaide Leiper Martin, at Baltimore, May 22.

ANDREW YOUNG, M.D., Glasgow, Scotland, to CHARLOTTE MURDOCH, M.D., of Baltimore, at Shanghai, China, April 5.

CHARLES E. SEXTON, M.D., Perkins, Okla., to Miss Cummins of Arkansas City, Kan., at Winfield, Kan., May 15.

HARRY WILLIAM VICKERS, M.D., Little Falls, N. Y., to Miss Susan J. Sullender of Eagle Rock, Va., at Saratoga Springs, N. Y., May 17.

Deaths

Clarence Tripp Gardner, M.D. Harvard University Medical School, Boston, 1866; a member of the American Medical Association; consulting surgeon to St. Joseph's Hospital, Providence, R. I., and to the Providence Lying-in Hospital; first lieutenant of infantry and later assistant surgeon in the Twenty-fifth Army Corps during the Civil War; for 40 years a practitioner of Providence, R. I., died at his summer home in Seaconnet, R. I., May 23, from kidney disease, after an illness of several months, aged 62.

Edward R. O'Reilly, M.D. New York University Medical College, New York City, 1882; a member of the Medical Society of the State of New Jersey and Union County Medical Society; advisory surgeon of the Metropolitan Traction Company, New York City, and for 14 years a member of the New Jersey State Board of Health; formerly physician of the city of Elizabeth and Union County, died at his home in Elizabeth, May 28, after an operation for appendicitis, aged 45.

Guy Davenport Lombard, M.D. New York University Medical College, New York City, 1896; a member of the American Medical Association; for several years secretary of the New York State Medical Association; a member of the New York County Medical Association, Bellevue Hospital Alumni Association and Association of American Anatomists; instructor in histology, Cornell University Medical College, died at his home in New York City, May 22, aged 34.

Henry W. Carpenter, M.D. New York University Medical College, New York City, 1858; a member of the medical societies of the State of New York and Madison County; for three years surgeon during the Civil War; formerly president and trustee of the village of Oneida; a member of the Assembly and coroner of Madison County, visiting physician at the Oneida Hospital, died at his home in that place, May 19, after a long illness, aged 72.

James Ross, M.D., C.M. McGill University Medical Faculty, Montreal, 1881; member of the College of Physicians and Surgeons, Ontario, 1882; L.R.C.P. London, 1881; surgeon-lieutenant-colonel of the Seventy-seventh Canadian Regiment and a practitioner of Dundas, Ont., for 25 years, died at his home in that city, May 21, from pneumonia, after a short illness, aged 53.

William N. Moore, M.D. Louisville (Ky.) Medical College, 1885; for five years physician of the Round Valley Indian Reservation; medical superintendent of the Ukiah (Cal.) Hospital and Sanitarium; for eight years physician of Mendocino County, died at his home in Ukiah, from brain disease, after an illness of about two years, May 15, aged 49.

Peter Achille Anaclet Collet, M.D. Laval University, Medical Department, Quebec, 1871; a member of the board of health of Fall River, Mass., and at one time city physician; a member of the medical staff of the Emergency Hospital, Union Hospital and Seaside Home for Children, died at his home in Fall River, May 22, after a lingering illness, aged 60.

Amassa Mortimer Bucknum, M.D. Vermont Academy of Medicine, Castleton (Castleton Medical College), 1849; for 27 years a practitioner of Denver, and for eight years a member of the staff of St. Luke's Hospital, died at his home in that city, May 25, from pneumonia, consequent on an injury recently received in a tramway accident, April 30.

George E. Dennis, M.D. Hahnemann Medical College and Hospital of Chicago, 1883; a veteran of the Civil War; coroner of Chippewa County, Minn., in 1883, and of Hennepin County in 1896, and a practitioner of Minneapolis for 23 years, died at St. Barnabas Hospital, St. Paul, from malignant disease, May 22, after a long illness, aged 67.

Dana Warren Hartshorn, M.D. Harvard University Medical School, Boston, 1854; chief medical officer on the staff of General Sherman during the Civil War; dean and for 20 years professor of surgery in Pulte Medical College, Cincinnati, died at his home in Avondale, Cincinnati, May 23, from cerebral hemorhage, aged 80.

Y. H. Morgan, M.D. Atlanta (Ga.) Medical College, 1868; a member of the Medical Association of Georgia and Pulaski County Medical Society; a Confederate veteran; twice member of the legislature, and for several years mayor of Cochran, Ga., died at his home in that place, May 19, from cerebral hemorrhage.

Daniel E. McSweeney, M.D. College of Physicians and Surgeons in the City of New York, 1864; a member of the medical societies of the State and County of New York; commissioner of education of New York City for two terms; died at his home May 20, from disease of the stomach, aged 65.

Mary J. Crosby, M.D. Northwestern University Women's Medical School, Chicago, 1901; of Chicago; associate obstetrician at Mary Thompson Hospital, is reported to have committed suicide, while mentally deranged, by throwing herself into Lake Superior at Duluth, Minn., May 25, aged 40.

Frederick William Lewis, M.D. Faculty of Medicine of Queen's University and Royal College of Physicians and Surgeons, Kingston, Ont., 1878; of Orangeville, Ont.; member of the legislative assembly from Dufferin County, died suddenly from heart disease, in Toronto, May 24, aged 52.

Charles Swope Barnitz, M.D. Pennsylvania Medical College, Gettysburg, 1853; one of the deputy state supervisors of elections of Ohio, and a well-known practitioner of Butler County, died at his home in Middletown, January 12, from angina pectoris, after an illness of two weeks, aged 76.

Charles Henry Andrew Stelling, M.D. University of Iowa, College of Medicine Iowa City, 1905; house physician at the University Hospital, 1905 and 1906; of Wheatland, Iowa, died at the University Hospital, Iowa City, May 20, two days after an operation for peritonitis, aged 23.

William H. Botts (Years of Practice, Ky.) 1893; for fifty-four years a practitioner of Kentucky; assistant surgeon of the Ninth Kentucky Volunteer Infantry during the Civil War, died at his home in Bagdad, Ky., May 15, a week after a fall in which he fractured his hip, aged 75.

Samuel S. Hoop, M.D. University of Tennessee, Medical Department, Nashville, 1901; of Andover, Pa.; a member of the Medical Society of the State of Pennsylvania and Fulton County Medical Society, is reported to have been shot and killed near Saluvia, Pa., May 25, aged 45.

Carlos Archie Allen, M.D. Barnes Medical College, St. Louis, 1896; a member of the American Medical Association; local surgeon of the Chicago & Alton Railway at Virden, Ill., died at his home in that city, May 23, from Hodgkin's disease, after an illness of six months, aged 40.

Stevenson W. Turpin, M.D. Medical Department of the University of Louisiana, New Orleans, 1861; surgeon throughout the Civil War in the Confederate service, and at its close staff surgeon for Gen. Stephen D. Lee, died at his home in Lettsworth, La., April 13, aged 69.

Charles Enrique Smith, M.D. Bellevue Hospital Medical College, New York City, 1887; for two terms city physician of Waco, Texas; a member of the State Medical Association of Texas and Waco County Medical Society, died at his home in Waco, May 17, aged 44.

David P. Leclair, M.D. American Eclectic Medical College of Ohio, Cincinnati, 1885; the first French physician in Augusta, Maine, and common councilman of that city, died at the Maine Insane Hospital, Augusta, May 21, after an illness of several years, aged 45.

Sterling W. Holt (License, Missouri, 1902); a member of the Moberly (Mo.) and Randolph County medical societies, died at his home in Moberly, April 28, from arteriosclerosis, after an illness of about six months, aged 75.

Archibald E. Franklin, M.D. Medical Faculty of the Western University, London, Ont., 1894; formerly a practitioner of Aurora, Ill., and Chicago, died at his old home in Brockville, Ont., May 16, after a long illness, aged 35.

Robert Smith Greene, M.D. Medical College of Alabama, Mobile, 1860; for four years surgeon in the Confederate army, and once a member of the Alabama legislature, died at his home in Greens, Ala., May 20, aged 72.

David G. Thompson, M.D. Chattanooga (Tenn.) Medical College, Medical Department, Grant University, 1900; is reported to have committed suicide by cutting his throat at his home in Fort Mill, S. C., May 27, aged 29.

John M. Fry, M.D. University of Pennsylvania Department of Medicine, Philadelphia, 1866; died at his home in Cleveland, Ohio, from progressive muscular atrophy, May 21, after an illness of several months, aged 76.

Archibald B. McCandless, M.D. Chicago Medical College, 1869; for many years a practitioner of Columbus Junction, Iowa, died at the home of his son in Perry, Okla., May 22, aged 79.

James Fields Hasty, M.D. University of Iowa College of Medicine, Iowa City, 1889; died at his home in Murray, Iowa, May 21, from brain tumor, after an illness of 18 months, aged 44.

Thomas Choate Pratt (Act of 1894, Mass.), formerly a practitioner of North Adams, Mass.; died in the Northampton Insane Hospital, May 16, after an illness of a year, aged 81.

E. H. Green, M.D. Hospital College of Medicine, Louisville, 1890; a Confederate veteran; fell from a porch at his home in Altamont, Ky., May 21, and was instantly killed, aged 53.

Emil W. Jewell, M.D. Eclectic Medical College of Pennsylvania, Philadelphia, 1867; of Lorain, Ohio, died at the Lorain Hospital, May 20, from uremia, aged 60.

Elijah James Milwain, M.D. University of Tennessee, Medical Department, Nashville, 1891; died at his home in that city, May 13, after a prolonged illness, aged 53.

John T. Carroll, L.R.C.S., L.R.C.P. Edinburgh, 1882; M.C.P. & S., Ontario, 1883; a pioneer physician of Vancouver, B. C., died at his home in that city, May 18.

Edmund R. Brown (Years of Practice, Ohio, 1896); for 20 years a practitioner of Sugar Grove, Ohio, died at the home of his sister in Crooksville, Ohio, May 12.

Lewis Burton Pierce, M.D. University Medical College of Kansas City, Mo., 1898, of Muskogee, I. T., died at his home in that city, May 22, aged 36.

George Rowe, M.D. Albany (N. Y.) Medical College, 1865; died at his home in Gloversvile, N. Y., May 8, after an illness of four weeks, aged 68.

Benjamin F. Little, M.D. Chicago Homeopathic Medical College, 1877; formerly of Columbus, Ind., died at Hazel Dell, Ill., May 17, aged 88.

Charles L. Eves, M.D. Medical Department, University of Nashville, Tenn., 1889; died at his home in Nashville, Tenn., May 19, aged 48.

Z. Ellis Kimble, M.D. College of Physicians and Surgeons, Baltimore, 1886; died at his home in Asheville, N. C., April 14, aged 46.

John W. Suggs, M.D. Reformed Medical College of Georgia, Macon, 1859; died at his home in Thomaston, Ga., May 16, aged 79.

Theodore E. Hansmann, M.D. Barnes Medical College, St. Louis, 1901; died at his home in St. Louis, May 25, aged 51.

George Walker (Years of Practice, Minn.), died at his home in St. Paul, Minn., April 17, aged 76.

Death Abroad.

Robert Barnes, M.D. London, 1848; F.R.C.P. London, 1859; F.R.C.S. Eng., 1883; formerly obstetric physician and lecturer on obstetrics at London, St. Thomas' and St. George's hospitals; once president of the Obstetrical and Hunterian societies; vice-president of the Royal Medico-Chirurgical Society and Royal Meteorological Society; honorary fellow of the Medical Society of the State of Pennsylvania and Fulton many other learned societies; eminent as an instructor and writer on obstetrics, whose name is known world wide among obstetricians and medical men, died at his residence in Eastbourne, Eng., May 12, aged 89.

Society Proceedings

COMING MEETINGS.

Maine Med. Assn., Lewiston, June 12-14 (changed from June 5-7).
Massachusetts Medical Society, Boston, June 11-12.
Medical Society of North Carolina, Morehead City, June 11-13.
Rhode Island Medical Society, Providence, June 13.
Medical Society of New Jersey, Long Branch, June 25-27.
Oregon State Medical Association, Seaside, July 12-13.

ILLINOIS STATE MEDICAL SOCIETY.

Fifty-Seventh Annual Session, held at Rockford, May 21-23, 1907.

The President, DR. J. F. PERCY, Galesburg, in the Chair.

Officers for Ensuing Year.

President, Dr. William L. Baum, Chicago; vice-presidents, Dr. C. W. Lillie, East St. Louis; Dr. T. H. Culhane, Rockford; secretary, Dr. E. W. Weis, Ottawa, re-elected; treasurer, Dr. E. J. Brown, Decatur, re-elected; delegates to American Medical Association, Drs. Frank Billings, Chicago; J. R. Hollowbush, Rock Island, and C. S. Bacon, Chicago; alternates, Drs. G. D. Smith, Elizabeth; Charles B. Horrell, Galesburg; Robert T. Gillmore, Chicago; E. B. Montgomery, Quincy; C. M. Jack, Decatur; William L. Ballenger, Chicago, and S. C. Stremmel, Macomb.

Peoria was selected as the place for holding the next annual meeting.

The scientific work was divided into two sections, medicine and surgery, but all of the papers were read before the general body. One day was set aside for the reading of and discussion of papers on medicine, one for papers and discussions on surgery, while the third day was devoted to the discussion of borderline cases.

SYMPOSIUM ON TUBERCULOSIS.

Early Diagnosis of Tuberculosis.

DR. ROBERT H. BABCOCK, Chicago, submitted two propositions: (1) Pulmonary tuberculosis is curable. (2) Its curability stands in direct relation to the stage of the disease. He considered the methods of diagnosis and the data on which the physical diagnosis must rest. As aids to diagnosis, he mentioned tuberculin and the Roentgen ray. Tuberculin, when properly used, is safe, and in the majority of cases its reaction denotes tuberculosis. The Roentgen ray is not of as much value to the average general practitioner as to the expert; nevertheless, in the hands of the skilled, the fluoroscope or skiagraph will detect lesions which have not developed to such an extent as to cause the manisfestation of physical signs in the lungs.

Social Aspects of Tuberculosis.

DR. HENRY B. FAVILL, Chicago, said the technic of treatment of tuberculosis, is reasonably well established. Thus far, however, the procedure is complex and inaccessible to the majority of those who are and are likely to become tubercular. The move of first importance is to simplify the necessary régime. The whole question becomes a medical and hygienic one, and in a chief degree a sociologic problem. He offered some suggestions as to the methods to be pursued.

Tuberculosis of the Ocular Structures.

DR. CASEY A. WOOD, Chicago, divided ocular tuberculosis into extraocular and intraocular. Tubercle of the conjunctiva he said, is probably much more common than is generally believed. Although primary tubercle of the sclerotic is practically unknown, it is often, like the cornea, invaded by uveal tuberculosis. Tubercle of the iris generally appears in the miliary form as discrete, disseminated, yellowish nodules, 2 to 3 mm. in diameter. They are associated with keratitis punctata, some pain, and a mild degree of ciliary injection. Tuberculosis of the chorioid occurs, first, as discrete, miliary nodules scattered over the fundus, seen with the ophthalmoscope as gray patches; or, second, as a mass of caseating tissue, formed beneath the detached retina. Tuberculosis of the ciliary body begins most frequently in the ciliary processes on the inner surface of the ciliary muscle, where its ciliary plexus is finest. Tubercle of the retina is much rarer than chorioidal tuberculosis. Tuberculosis of the optic nerve, originating in its pial sheath as discrete nodules may become confluent and surround the nerve with a diseased ring.

Diagnosis and Treatment of Laryngeal Tuberculosis.

DR. WILLIAM E. CASSELBERRY, Chicago, said that while the diagnosis of tuberculosis of the larynx ordinarily is not difficult, in exceptional cases its substantiation or exclusion is beset with uncertainty. The first type described as fairly typical of a considerable group of cases, is not at all of an unusual sort. It is named the galloping type, in order further to emphasize the contrasts between it and the one next described, which is named from its salient characteristics, the chronic hyperplastic type.

Among the other unusual types which are apt to involve uncertainty in diagnosis are the unilateral type, the verrucous type, the so-called conjoined syphilitic and tuberculous type, and the condition of arrest of the disease. Well-authenticated convincing instances of the latter fortunate termination are discouragingly rare in literature, yet they certainly occur.

The treatment of the laryngeal complication, he said, is bound up in that of the pulmonary and general state.

Management of Tuberculosis.

DR. CLARENCE L. WHEATON, Chicago, pointed out the importance of early recognition of tuberculosis, and what clinically constitutes involvement. He referred to the value of the sanatorium in the management of tuberculosis at home. He submitted a form of ordinance, which may be used as a basis for legislation of municipalities regarding tuberculosis. Lastly, he emphasized the importance of reducing the opportunities for infection, promoting the individual powers of resistance, and utilizing all educational influences at our disposal in the management of tuberculosis.

Sanatorium Treatment for Tuberculosis.

DR. E. H. BUTTERFIELD, Ottawa, said that it is important, first, to consider the construction and location of sanatoria. Second, the necessity for early diagnosis and prompt treatment. Third, the principles of treatment are not easy of application, and it is necessary to individualize. Fourth, the public is dangerously educated as to the curability of consumption, and the popular misconception as to time limit. The word cure should be used with caution. Climate, he said, is not an essential in the treatment.

DR. J. W. PETTIT, Ottawa, said it should be repeatedly emphasized that tuberculosis is only curable in the incipient stages, although in exceptional instances we get some very remarkable results in far-advanced cases, but the ultimate results in the treatment of the far-advanced cases are not very promising.

Ulcerative Endocarditis.

DR. JAMES B. HERRICK, Chicago, said that a complicating nephritis may cause one to overlook primary infectious endocarditis. If one lives up to the rule of trying to find a cause in every case of acute nephritis, and of careful examination of the heart, he will seldom be in doubt as to the existence of endocarditis and an acute infection.

(To be continued.)

NEW MEXICO MEDICAL ASSOCIATION.

Twenty-Sixth Annual Meeting, held at Las Cruces, May 8-9, 1907.

DR. THOMAS B. HART of Raton, President.

Officers Elected.

The following officers were elected for the ensuing year: President, Dr. R. E. McBride, Las Cruces; vice-presidents, Drs. G. K. Angle, Silver City, and B. M. Steed, Deming; secretary, Dr. G. S. McLandress, Albuquerque; treasurer, Dr.

C. G. Duncan, Socorro; delegate, Dr. W. R. Tipton, Las Vegas. Next meeting place, Albuquerque, fall of 1908.

Scarlatinal Sore Throat.

DR. T. C. SEXTON, Las Cruces, called attention to the many apparently mild and simple anginas occurring during an epidemic of scarlatina. He deems it of great importance to look carefully into each case with a view to determining its nature. These cases (some never even seen by a physician) are of greater danger to the public health and spread disease more readily and more widely than do those cases where the diagnosis is clear, for the reason that the typical cases are quarantined and all necessary precautions are taken to prevent a spread of the disease, while in those cases not seen, and in the milder forms of sore throat no measures are taken to isolate and disinfect.

Tubercular Laryngitis.

DR. E. S. BULLOCK, Silver City, described his method of treating tuberculosis of the larynx. He uses formaldehyd in solution, beginning with one drop of the regular 40 per cent. solution to one ounce of distilled water, and gradually increasing the strength until 10 or 12 drops to the ounce are borne without any discomfort. In simple infiltration of the larynx, without ulceration, he uses a spray with the tip introduced into the larynx and a pressure of 20 pounds to spray the solution. In the ulcerative cases he first cleanses the ulcers with either tar water or a solution of bicarbonate of soda and then applies the formalin solution directly to the ulcer by means of a laryngeal forcep and a pledget of cotton, rubbing the solution into the ulcer for as long as three minutes. By careful education the patient is able to bear this treatment easily and without discomfort, and the results are all that could be desired where persistence is pursued.

Surgical Treatment of Fibroid Tumors of the Uterus Complicated by Pregnancy.

An abstract of this paper by Dr. James Vance, El Paso, Texas, appeared in THE JOURNAL, June 1, page 1900.

Tumor of Thyroid.

DR. GEORGE C. BRYAN, Alamogordo, reported three interesting cases of tumor of the thyroid. Case 1 was in the person of an Albanian laborer, 40 years of age, who was brought to the hospital in a profoundly septic condition. Since boyhood he had had a swelling on the right side of the neck which had not increased in size nor given any discomfort. When brought to the hospital he was much emaciated and presented a puffed and pallid, yellow condition of the skin. The front of the neck was immensely swollen and fluctuated on percussion. Patient was comatose, temperature 105 F., pulse very rapid and irregular. A long free incision was made into the tumor, which discharged much pus and necrosed and gangrenous tissues. After thorough cleansing, drainage was inserted and a wet dressing applied and the patient returned to bed. Patient did not rally and died after ten days. Abscess of liver and multiple abscesses of the lung were found on postmortem.

Case 2 was a Mexican woman, about 40, who had had a thyroid swelling for a number of years. Following a cold, the tumor increased in size and became painful. The respirations were very difficult. Examination showed the right lobe of the thyroid much enlarged. Under anesthesia an incision was made and the right lobe removed. Recovery was rapid and uneventful.

Case 3 was a young man, 19 years of age, who gave a history of slowly growing thyroid for the past four years. Six months before he had been operated on for abscess of the liver. This was followed by an enlargement of the tumor and failing health. When seen he was emaciated, weak, with a pulse of 138, irregular, and respiration embarrassed. The right side of the neck was occupied by a fusiform tumor which appeared to be pulsating. With the diagnosis in doubt, an incision was made and the tumor shown to be of the right lobe of the thyroid, which was removed. Recovery was uneventful. These cases were reported to show that simple benign tumors of the thyroid are sometimes complicated by grave septic conditions.

Relation of Christian Science to the Practice of Medicine.

DR. S. A. MILLIKEN, Silver City, called attention to the many forms of pseudo-medical fads that are annually brought forward causing numerous unnecessary deaths. He holds that the profession is largely responsible for this condition of affairs. He discussed the Christian science fallacy, and concluded that the physician should study this as well as all other similar teachings, in order to be better able to educate the community and teach the dangers of following such doctrines.

The Wise General Practitioner as a Factor in the Prevention of Tuberculosis.

DR. C. W. TAYLOR-GOODMAN, Albuquerque, discussed the various ways in which the general practitioner and the family physician may serve as teachers in spreading the gospel of sanitary and hygienic living with a careful attention to all of the factors that go to prevent a lowering of the individual resistance, on the one hand, and the spreading of disease germs, on the other.

Orthostatic and Physiologic Albuminuria and Their Relation to Tuberculosis.

DR. F. T. B. FEST, Las Vegas, included in the paper under albuminuria all proteinurias. He gave a history of the most important contributions to the literature of this subject until the modern epoch initiated by Leube. He went exhaustively into the literature of the subject, and dealt with the condition from all sides, discussing fully each and every supposed cause, and concludes that, in regard to orthostatic albuminuria, we are unable to give any chemical test an exclusive significance; orthostatic albuminuria is apparently of obscure hematogenetic or functional origin. Each case has to be considered individually and treated accordingly. Orthostatic albuminuria merits our attention only as a manifestation and not as a disease. A bibliography of some 350 references accompanied this paper.

Necessity of Exercise in the Treatment of Tuberculosis.

DR. S. A. MILLIKEN, Silver City, believes that exercise is necessary to the best results in the treatment of tuberculosis. By exercise he does not mean exertion on the part of the patient. We must take into account the various processes of waste, repair and excretion, and inasmuch as in health perfect repair and perfect excretion are promoted by exercise, so also is this true in disease where the repair processes and the relative amount of waste to be carried off are increased. Good judgment must be exercised in determining what is necessary for each individual case.

Primary Tuberculosis of Cecum and Appendix.

DR. B. F. STEVENS, El Paso, Texas, reported the case of a young woman who had had repeated attacks of what was diagnosed as appendicitis. The first of these had appeared at the age of 14. These attacks occurred about twice a year until she was 17, and were all marked by the same symptoms, viz., pain, low down in right side, temperature and vomiting. During the last two years a tumor had been noticeable in right inguinal region larger during attacks, but always present. When seen patient weighed about 70 pounds and was thin and anemic, and had been acutely ill for two weeks. She was operated on, and a fixed hard tumor involving head of the cecum was removed. It was thought to be malignant and was excised *in toto*. End-to-end anastomosis was made with a Murphy button. Convalescence was slow, but seemed satisfactory, until at the end of three months, when a symmetrical enlargement of the abdomen was manifest, and she again developed temperature, anorexia and vomiting, and a second operation was done and two ovarian cysts were extirpated. Two months later still another tumor developed in the inguinal region and a third operation was performed. At this time the intestines were found matted together, but there was no free fluid nor pus. All attempts to separate them were unavailing, and the wound was sewed up leaving drainage. Patient went from bad to worse, and complete stenosis occurred two months later, with death four hours after an operation for artificial anus.

NEBRASKA STATE MEDICAL ASSOCIATION.

Thirty-Ninth Annual Meeting, held in Omaha, May 7-9, 1907.

The President, DR. F. A. LONG, of Madison, in the Chair.

President's Address.

DR. LONG reviewed the progress that was made by the association during the year, and advocated sending an organizer over the state, who would personally interview the physicians in the interest of organization. He suggested amending the constitution of the society so that, under proper restrictions, counties having more than five eligible physicians, but whom it appeared impossible to organize, may affiliate with an adjoining county. He also discussed the desirability of establishing an official organ in which can be published the papers read at the annual meeting, the proceedings and other matters of interest to the doctors in the state. He commended very highly the work done by the Council on Pharmacy and Chemistry of the American Medical Association, and in this connection emphasized the necessity of more thorough teaching of prescription writing in medical colleges.

Dr. Long scored the practice of giving and accepting commissions, and stated that the fees paid by insurance companies for examining applicants are too low.

The secretary, Dr. H. Winnett Orr, Lincoln, stated that there are 54 county societies and 780 members in the state society.

A large number of very interesting papers were read and elicited spirited discussion.

Medical Defense Fund Created.

The association decided to create a medical defense fund, and the membership fee was raised to $3, $1 to go into the defense fund.

A resolution was also passed against the giving and acceptance of commissions for referred cases. The medical defense committee was authorized to secure the services of an attorney to assist in carrying on such work as may be referred to him.

A resolution was also adopted commending Gov. G. L. Sheldon for his action in appointing as medical superintendents of the various state institutions men who were well qualified by training and experience rather than those who might have better claims for political preferment.

Some Points in the Diagnosis of Ectopic Gestation.

DR. A. P. CONDON, Omaha, dealt particularly with the microscopic findings in the uterine decidua in those cases in which conception takes place outside the uterus. He insisted on the routine microscopic examination of all discharges from the uterus, whether obtained naturally or by means of the curette in suspected cases of extrauterine pregnancy.

Stomach Symptoms but Not Stomach Disease.

DR. F. A. LITTIG, Iowa City, Iowa, discussed those cases of appendiceal, gall bladder and other intra-abdominal and intrathoracic as well as nervous and circulatory disturbances in which there are symptoms of gastric disease. Dr. Littig produced a large number of illustrative case histories to establish his various points.

Rupture of Uterus.

DR. O. GROTHAN, Kearney, presented in connection with his paper extensive tables showing the results obtained in all other reported cases of rupture of the uterus and added his cases to those previously reported, showing three cases with two recoveries.

Anteflexion of the Uterus.

DR. H. M. HEPPERLEN, Beatrice, presented a modified cervical stem made of glass which he designed for the treatment of these cases.

Anastomosis of the Hollow Viscera.

DR. VAN BUREN KNOTT, Sioux City, Iowa, presented a special instrument which he devised for use in entero-anastomosis.

Diabetes and the Consumption of Sugar in the United States.

DR. W. O. BRIDGES, Omaha, intimated that the large per capita increase of sugar in this country might be held responsible for a similar increase in the number of cases of diabetes. He presented extensive statistics both from the United States government reports and the health reports of various large cities to justify his conclusion and to show that there was something more than mere coincidence in the much larger number of diabetes cases and the enormous per capita increase of sugar in this country during the past 100 years.

The Treatment of Puerperal Sepsis.

DR. CHARLES ROSEWATER, Omaha, showed that in spite of modern knowledge and methods puerperal sepsis does still occur, and advocated thorough treatment along the lines suggested by him when such cases are found.

Defective Diagnosis in Diseases of Children.

DR. H. W. ORR, Lincoln, brought out the point that the health reports of all our large cities show that an unnecessary number of cases of death in children are reported with an inadequate diagnosis. Deaths reported due to convulsions, marasmus and inanition are probably more often contagious diseases, tuberculosis, milk poisoning, etc. Dr. Orr stated that if the same incomplete diagnoses were submitted in cases of death among adults a coroner's inquest would be invoked to satisfy the health authorities.

Some Problems Concerning Stomach Surgery.

DR. B. B. DAVIS, Omaha, pointed out that while not too much stomach surgery has been done, some stomach surgery is being done which is not indicated by the conditions present. He advocated a more judicial selection of cases for gastrointestinal surgery, and said that many stomach cases now requiring surgical relief are not being treated in that way.

Retrobulbar Orbital Cyst Treated by Krönlein's Operation and Carbolic Acid.

DR. H. GIFFORD, Omaha, presented a most interesting report of a case in which by attacking the tumor through the lateral wall of the orbit and the application of carbolic acid to destroy the cyst membrane, a cure had been accomplished and the eyeball preserved with nearly normal sight.

Officers Elected.

The following officers were elected for the ensuing year: President, Dr. H. Gifford, Omaha; vice-presidents, Drs. L. M. Shaw, Osceola, and Inez C. Philbrick, Lincoln; secretary, Dr. H. Winnett Orr, Lincoln; treasurer, Dr. A. S. von Mansfelde, Ashland; councilors, Dr. A. P. Overgaard, Fremont, fifth district; Dr. Quincy, sixth district; Dr. A. W. Fitzsimmons, Ohiowa, seventh district; Dr. M. B. McDowell, Merriman, eighth district; delegate to the American Medical Association, Dr. F. A. Long, Madison; alternate, Dr. C. C. Gafford, Wymore.

Lincoln was chosen as the place of meeting for the next annual session.

PHILADELPHIA ACADEMY OF SURGERY.

Special Meeting, held May 6, 1907.

DR. ROBERTS, the President, in the Chair.

This society held a special meeting May 6 and entertained at dinner a number of friends from other cities. The banquet was a very pleasant occasion and was followed by the scientific session reported below. After the discussion of the papers the evening closed with a reception to the visiting guests in the Mütter Museum of the College of Physicians.

Address in Surgery.

DR. EDWARD MARTIN reviewed briefly the recent remarkable advances made in surgery and expressed an optimistic hope for the future.

Ligation of the Ductus Arteriosus.

DR. J. C. MUNRO, Boston, has conceived the idea of ligating the ductus in those cases where in new-born infants the failure of the duct to close leads to a fatal result. Dr. Munro's presentation of the operative possibilities made it apparent that the suggestion had not been made without due con-

sideration of all the facts and possibilities, and led one to think that he who shall first risk carrying out the suggestion may obtain a result more than simply successful.

Arteriotomy for Embolism and Thrombosis.

DR. FRANCIS D. STEWART, Philadelphia, discussed two cases of embolism and thrombosis, in which he had resorted to arteriotomy. While the end results were not entirely satisfactory, Dr. Stewart demonstrated the possibility of diagnosing and accurately operating in such conditions with very good hope of success.

The Technic of Blood Vessel Suture.

DR. J. EDWIN SWEET, Philadelphia, discussed the most recent ideas on the technical questions involved, stating his belief that the exact end-to-end method, known as the Carrel, is probably the most perfect. The question of thrombosis after such operations is not clear, and there is room for work still along this line. The specimens demonstrated were from the Laboratory of Experimental Surgery of the University of Pennsylvania, most of them being the result of the work of Dr. G. M. Dorrance.

Operation for Aneurism.

DR. CHARLES H. FRAZIER, Philadelphia, reported two cases of the operation for endo-aneurismorrhaphy proposed by Dr. Matas. These two cases had been most happily joined by chance, since they represented two most interesting phases of the operation, the one an almost diagramatic case, where Dr. Frazier expressed himself as surprised at the ease of carrying out the operation; the other, one of extreme difficulty, owing to the almost uncontrollable hemorrhage from the large collateral branches opening into the aneurismal sac.

DR. JOHN H. GIBBON, Philadelphia, reported two other cases and warmly recommended the operation as being the most logical procedure.

DISCUSSION.

DR. G. E. BREWER, New York, told of his experience in the suture of blood vessels and of his attempts to solve the problem by means of a cohesive tissue wrapped around the vessel.

DR. J. B. MURPHY, Chicago, emphasized the value of experimental work as bearing on the future of surgery.

DR. J. F. BINNIE, Kansas City, called attention to the difference between a saccular and a fusiform aneurism, and noted the difference which each type would make in the operation itself and its prognosis.

DR. HUBBARD, Boston, described the results he had obtained in one or two cases of gangrene of the lower extremity by reversing the circulation.

AMERICAN SURGICAL ASSOCIATION.

Annual Meeting, held at Washington, D. C., May 7-9, 1907.

(*Continued from page 1886.*)

The Treatment of the Posterior Capsule of the Gland in Thyroidectomy.

DR. CHARLES H. MAYO, Rochester, Minn., said that the physiologist, in expanding our knowledge of the thyroid and associated ductless glands, has shown the necessity for greater care and changes in technic in the surgical treatment of goiter. By preserving the posterior capsule of the thyroid gland in operations for goiter we save the parathyroids and avoid much of the danger of injuring the recurrent laryngeal nerves.

Aneurismal Varix: A Case of Pulsating Exophthalmos.

DR. GEORGE TULLY VAUGHAN, Washington, D. C., reported a case of pulsating exophthalmos probably caused by communication between the internal carotid artery and cavernous sinus, in which he ligated the internal carotid artery near its origin. Death resulted from cerebral anemia. He also reported three cases of aneurismal varix, with dilatation of the vein on the proximal or cardiac side of the point of communication between the artery and vein, and discussed the causes of the dilatation, which occurred where it would least be expected to occur.

Guarded Vertical Traction in the Reduction of Congenital Dislocations.

DR. OSCAR H. ALLIS, Philadelphia, called attention to the method of horizontal traction on the extended femur, stating that its adoption is based on the principle that dislocations of the hip occur from violence exerted on the extended limb, and the teaching of the early surgeons that the chief obstacle to reduction lay in the resistance of the muscles. By means of a lever, traction is applied to the vertical femur, and to guard against over action from such advantageous force, a spring balance is placed betwen the knee and the short arm of the lever. In young children he applies about twenty pounds of traction for fifteen minutes, and then unhooks the apparatus and attempts reduction. This he does by raising the flexed limb vertically, and when it has reached the level of the socket he abducts and presses the head inward, by using the thumb of his unoccupied hand. If the reduction is easily accomplished a fixation dressing is applied. If not, a second series of traction exercises are resorted to. The apparatus used permits of every motion that will be likely to meet with resistance. The limb can be adducted, abducted, flexed or extended, and even circumducted, while gradually increasing traction is being made, and the operator proceeds with the utmost confidence, since he can read on the register of the spring balance the exact amount of force he is exerting. Experience with the lever proved that the long fulcrum of the lever did not give the operator the freedom that was desirable; hence, an instrument was devised with parallel fulcra, and instead of a lever a screw is employed.

Primary Sarcoma of the Prostate.

DR. CHARLES A. POWERS, Denver, reported the case of a man 60 years old, who had had no bladder trouble until two months before seen, at which time he began to notice a little pain and discomfort on urination, and he began to rise in the night to urinate. The symptoms rapidly increased in severity and the patient lost flesh and strength. On examination the man complained of constant severe pain in the hypogastric region with a constant pain, less severe, in the recto-perineal region. He was urinating about every one and a half hours, urination being difficult and painful. The urine was normal. Catheterization found no residual urine whatever. Rectal examination revealed a very large rounded, slightly nodular, balloon-like prostate. The finger did not reach the upper margin. The impression gained on digital examination was an unusual one. A tentative diagnosis of sarcoma was made. A perineal prostatectomy was done. The process of enucleation was attended by profuse, alarming hemorrhage. This was difficult to check. Frequent hemorrhages obliged one to stop and pack. Nowhere could a lead be gained between gland and capsule. Friable masses were reamed out from both sides of the gland; these had the appearance of sarcoma. It was not possible to entirely get beyond the growth. The patient succumbed to a double pneumonia on the fifth day. Histologic examination of the growth showed it to be a small round-celled sarcoma. A careful search of the literature revealed but 19 additional authentic cases of primary sarcoma of the prostate, microscopically proven. Twelve of these were in children under 15 years of age; seven of them were of the small round-celled type. Each of these patients succumbed to operation or to a recurrence of the growth.

Acquired Diverticulitis of the Large Intestine.

DR. WILLIAM J. MAYO, Rochester, Minn., stated that diverticulitis of the colon is essentially confined to the sigmoid and is due to the pressure of the hardened feces against the mucous membrane, which herniates through defects in the musculature. The weakness of the intestinal wall which permits this may be congenital or acquired. Enteroliths form in these little pockets and give rise to infection and suppuration, or to tumor formation, constituting the disease. As a rule, only a few inches of the bowel is involved, although an enormous number of diverticulæ may be exhibited in this space.

The patients are usually obese and over 45 years of age. The physical evidences of the disease will be found in the middle and lower left quadrant of the abdomen. A tumor fre-

quently exists with attacks of obstruction of the bowels, or attacks of peritonitis. The disease is usually mistaken for: 1, Left-sided appendiceal abscess; 2, cancer, and a large number of the cases reported as cures of cancer by resection of the intestine are really cases of diverticulitis; 3, fecal impaction.

The surgical treatment of diverticulitis of the colon depends on the condition present. First, localized suppurative cases must be treated with free drainage. If acute obstruction of the bowels develops, a temporary artificial anus should be made, and, if necessary, after the infection has subsided, the involved colon may be resected. Second, if a considerable tumor is present and the symptoms do not show a tendency to disappear, it is better to make a primary resection of the affected part of the bowel before abscess and fistula supervene.

The Diverticulum Ilei as a Cause of Complete Intestinal Obstruction.

DR. FREDERIC H. GERRISH, Portland, Maine,, gave the history of a case in which, after four days of absolute occlusion of the small intestine, surgical intervention was invoked. The seat of the difficulty was determined to be near the lower end of the ileum. The abdomen was opened in the right linea semilunaris, and the cause of the obstruction readily found. A diverticulum, starting from the ileum about 50 cm. from the cecum, had passed from right to left through an opening in the attached border of the mesentery, and was held there by a cord extending from its free extremity to the anterior abdominal wall. The intestine proximal to the obstruction was distended and congested; distal to this point it was shriveled and pale. The diverticulum was released and cut away; the pedicle was sutured, depressed into the lumen of the gut, and its site covered with peritoneum. The abdominal wound was closed without drainage. Recovery was rapid and perfect.

Etiology of Certain Cases of Left-Sided Intra-abdominal Suppuration (Acute Diverticulitis).

DR. GEORGE EMERSON BREWER, New York City, reported three cases of left-sided intra-abdominal abscess in which no definite cause for the infection could be ascertained at the time of operation. In a fourth case a very definite cause for the symptoms was found. A man, 48 years of age, was attacked in the night with a sudden right-sided abdominal pain associated with nausea and vomiting. On the following morning there was intense, well-marked tenderness in the lower left quadrant of the abdomen. At the end of twenty-four hours he had an elevation of temperature, increased pulse rate, and all the evidences of a mild infection. When seen by the author, two or three days later, there was well-marked rigidity of the left rectus muscle, tenderness on palpation throughout the left half of the abdomen, and a distinct mass in the neighborhood of the left anterior superior spine of the ileum. The abdominal wall was incised and a large abscess encountered, which lay to the outer side and behind the descending colon and sigmoid. This abscess contained several ounces of foul-smelling pus, and in the bottom of the abscess cavity was a definitely formed fecal concretion about the size of a date seed. Careful inspection of the abscess wall showed a small perforation into the sigmoid.

A fifth case was that of a man 58 years of age, who was admitted to the hospital with a diagnosis of acute appendicitis, with generalized peritonitis. On examination the abdomen was distended and tender; generalized muscular rigidity was present. On opening the abdomen the cavity was found to contain a large amount of foul-smelling pus, the intestines were everywhere injected, and in places covered with fibrin. The appendix showed no definite lesion, but on removing the intestines from the pelvic cavity a perforation of the sigmoid was found, and in the immediate neighborhood an oval fecal concretion about the size of an orange seed was detected. The rent in the sigmoid was closed, the abdomen washed out, but the patient died at the end of forty-eight hours. From these cases he concludes that a rupture of an acquired diverticulum of the descending colon or sigmoid not infrequently gives rise to symptoms of intra-abdominal infection, simulating appendicitis. In fact, in the first two of his cases the writer was inclined to regard them as cases of appendicitis with transposition of the viscera.

(To be continued.)

Therapeutics

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and methods of treatment for the diseases seen especially in every-day practice. Contributions will be welcomed from our readers.]

Psoriasis.

The treatment of psoriasis should aim to restore the patient to a correct state of the general health, and with this in view a careful examination should be made to detect any deviation from the normal on the part of any of the organs. The diet should be supervised, and the food should be such as is easily digested, meat being excluded or much reduced in quantity. G. H. Fox, in the *Journal of Cutaneous Diseases*, says: "I have rarely seen a patient with chronic psoriasis who had not observed the fact himself or could demonstrate after the matter was suggested to him, the fact that during the free use of meat the psoriatic patches invariably became more congested. In the catabolism undergone by the proteid or albuminous element of food will doubtless be found, in time, the precise origin of the autotoxins which underlie many of our common skin diseases." In close connection with the use of meat are the indications that a gouty origin may be assigned to the disease in many cases. Saline cathartics such as Epsom or Rochelle salts or the artificial Carlsbad salt (*Sal Carolinum factitium effervescens* of the National Formulary) will be found useful. Alkalies are recommended. Stelwagon combines arsenic with alkalies as follows:

℞. Liquoris potassii arsenitis.....f3ii-iii 8-12|
Liquoris potassii hydroxidi.....f3iv-f3i 15-30|
Aquæ menthæ pip. q. s. ad.....f3iii 90|

M. Sig.: A teaspoonful in half a tumblerful of water after each meal. [It is well to begin the administration of the liquor potassii arsenitis (Fowler's solution) in much smaller doses.—ED.]

℞. Liquoris potassii arsenitis.....f3ii 8|
Liquoris potassii citratis.....f3viii 240|

M. Sig.: Two teaspoonfuls after meals.

Tonics are frequently required, in which case the alkali may be given separately and arsenic combined with other tonics as recommended by Shoemaker:

℞. Acidi arsenosi.....gr. i |06
Quininæ sulphatis.....gr. xl 2|6

M. Ft. pil. No. xx. Sig.: Take one pill after meals. Or:

℞. Sodii arsenatis.....gr. i |06
Extracti hyoscyami.....gr. v |3
Extracti gentianæ.....gr. xx 1|3

M. Ft. pil. No. xx. Sig.: Take one pill after meals.

Sometimes the author finds that the value of the arsenic is much enhanced by giving both quinin and strychnin with it, as in the following combination:

℞. Quininæ sulphatis.....gr. xxx 2|
Acidi arsenosi.....gr. i |06
Strychninæ sulphatis.....gr. ss |03
Aloini.....gr. i |06
Etxracti belladonnæ.....gr. iii |19

M. Ft. pil. No. xl. Sig.: Take one pill after meals.

The local applications for psoriasis are very numerous. Shoemaker recommends Wilkinson's ointment, which is official in the National Formulary as Unguentum Sulphuris Compositum. Liquor Picis Alkalinus (N. F.) is also a useful preparation. Tinctura saponis viridis composita is recommended. Vleminck's solution, liquor calcis sulphuratæ and Rochard's ointment are effective especially in inveterate cases, although they produce considerable suffering. Rochard's ointment is made as follows:

℞. Iodi.....gr. xl 2|6
Hydrargyri chloridi mitis.....3ss 2|
Unguenti.....3xiv 55|

M. Ft. unguentum.

These and other remedies must be applied after a thorough removal of the scales, which may be effected by an alkaline bath, using from 2 to 6 ounces (60 to 180 gm.) of sodium carbonate, borate or bicarbonate to the bath. Stelwagon recommends sal ammoniac in the same proportion as much more efficient.

Shoemaker recommends an ointment for the removal of scales made according to the following formula:

℞. Ammonii carbonatis.....3iiss 10|
Adipis lanæ.....3vi 25|
Unguenti aquæ rosæ.....3xii 50|

M. Ft. unguentum.

Stelwagon states that, on the whole, chrysarobin is the most powerful local remedy in the treatment of psoriasis, and that if properly used it frequently removes the eruption. He advises its employment as a powdery film or as a paint, the latter being less active. Its efficacy may be enhanced by the use of salicylic acid.

When used as a powdery film the drug is mixed with chloroform, from 1 to 2 drams (4 to 8 gm.) to the ounce (30 gm.); or it may be used as a saturated solution, chloroform taking up about 40 grains (2.65 gm.) to the ounce (30 gm.). The patches are freed from scales and freely painted over—giving two or three coats. The chloroform evaporates and leaves a thin layer of the powder. To keep this in place Stelwagon applies over it a few coatings of either plain or flexible collodion or a mixture of the two. New appliances are made as necessary. As soon as the tendency to scaliness ceases and the skin of the patches becomes pale and normal, the applications are discontinued.

Stelwagon states that this method is generally successful with large, stubborn patches. Staining of the surrounding skin follows the applications, but to a less extent than when chrysarobin salve is used.

When chrysarobin is used as a paint it is prescribed in collodion or in solution with gutta-percha, 48 grains (3.2 gm.) to the ounce (30 gm.). Fox recommends adding salicylic acid, but this is not comfortably borne by individuals with delicate skins. The following formula is recommended by Stelwagon:

℞. Chrysarobini .....3i 4|
Acidi salicylici.....gr. x-xx |65-1.3
Ætheris .....f3i 4|
Olei ricini.....m. v |33
Collodii q. s. ad.....f3i 30|

M. Sig.: Apply to the psoriatic patches.

This is less apt to stain the clothing and surrounding parts. Stelwagon states, if a coating of plain or flexible unmedicated collodion be painted over it.

Acute Gastritis.

The causes of acute or subacute gastritis may be irritants introduced into the stomach through the mouth or regurgitated from the intestine (a rare event) or else excreted from the blood. The irritant may arise from the decomposition of food. In such cases the food should be removed from the stomach. For this purpose emetics are recommended by most authors. Rodari (*Grundriss der medicomentosen Therapie der Magen und Darinkrankheiten*) recommends apomorphin in doses of from 1/12 to 1/6 grain (0.005 to 0.01) hypodermically. Ewald and Boas recommend the following:

℞. Pulveris ipecacuanhæ.....gr. xxiii 1|5
Antimonii et potassii tartratis.....gr. 5/6 |05

Ft. chart. No. i. Sig.: To be taken at once or in divided doses.

Rodari considers tartar emetic contraindicated on account of the irritation of the gastrointestinal tract which it produces. The same objection holds against the use of copper sulphate as an emetic. Riegel and Boardman Reed properly protest against the use of irritating emetics. It is often practical to provoke vomiting by causing the patient to drink large quantities of warm water, followed by tickling the fauces or by the attempted introduction of the stomach tube. Vomiting is preferable to lavage for cleansing the stomach of food, since in some instances the masses of food are so large that they can not pass through the tube. Reed advises the ingestion of considerable amounts of water, not less than a pint at a time, once in fifteen minutes, until the stomach is completely emptied.

The stomach being emptied, absolute abstinence from food should be enjoined for twenty-four hours or until the signs of irritation cease. The intestine should be emptied and disinfected so far as this is possible by calomel.

Reed recommends giving 1/6 grain (0.01) of calomel every half-hour until it produces copious yellow stools. Hemmeter, following Ewald, gives 6 grains (0.4) at once, and repeats this dose in an hour. Rodari combines it with benzo-naphthol in the following prescription:

℞. Hydrargyri chloridi mitis.....gr. iiss-iv |15-.25
Benzo-naphthol .....gr. viii |5

M. Ft. pulv. No. iii. Sig.: One powder every two hours.

Other purgatives are contraindicated on account of their irritating qualities.

The stomach being empty, irritation usually promptly subsides. When it does not the appropriate remedies are charged waters containing carbon dioxid, alkalies to neutralize any excess of acid, menthol and in case of much pain, codein.

The fact that beer sometimes relieves vomiting may be explained by the fact that it contains alcohol in small amounts and carbon dioxid, two gastric sedatives. For hyperacidity indicated by continued pyrosis and thirst, Hemmeter recommends the following:

℞. Magnesii oxidi |
Sodii bicarbonatis, āā.....3iiss 10|
Menthol .....gr. xxx 2|

Misce intime. Sig.: One-half teaspoonful as needed, followed by three ounces of water.

Rodari combines the following:

℞. Menthol .....gr. xxx 2|
Sacchari alb. |
Acaciæ, āā.....gr. xv 1|

Ft. pil. No. xx. Or:

℞. Menthol .....gr. xv 1|
Alcohol |
Syrupi, āā .....3vi 24|

M. Sig.: A teaspoonful once an hour.

In giving alkalies it is best to use magnesia if there is constipation and replace it by precipitated carbonate of calcium if there is diarrhea.

Boas advises the following suppository if pain is troublesome:

℞. Codeinæ phosphatis.....gr. i |06
Extracti belladonnæ.....gr. ss |03
Olei theobromatis q. s. |

Ft. suppositoria No. x. Sig.: One suppository every hour until relieved.

By the mouth Hemmeter advises giving codein as follows:

℞. Codeinæ phosphatis.....gr. vi |4
Aquæ menthæ piperitæ.....f3iss 45|

M. Sig.: One teaspoonful every three hours.

The following has been successful in Hemmeter's experience in checking persistent vomiting:

℞. Bismuthi subsalicylatis.....gr. x |65
Cocainæ hydrochloridi.....gr. ss |03
Menthol .....gr. ii |13
Aquæ camphoræ .....f3ss 15|

M. Sig.: Every two hours until relieved.

In case the appetite fails after the attack he gives the following:

℞. Strychninæ sulphatis.....gr. 1/3 |021
Acidi hydrochlorici dil.....f3iii 12|
Elixir gentianæ q. s. ad.....f3vi 180|

M. Sig.: One tablespoonful diluted with two ounces of water three-quarters of an hour before meals. Take through a glass tube.

Medicolegal

Absence of Attending Physician in Injury Case.

The Second Appellate Division of the Supreme Court of New York says that in the personal injury case of Brotherton vs. Barber Asphalt Paving Company, it appeared that at the trial the physician who treated the plaintiff for the injuries complained of, and who had treated him for injuries received in a prior accident, was not present as a witness, and did not testify. When counsel for the defendant summed up he undertook to comment on the failure of the plaintiff to produce his physician as a witness. But on cross-examination the plaintiff had sought to explain away the absence of his physician. He said that the physician had been there every day, and

that he looked for him that day, though he had told him the day before that the case would probably be reached by the last of the week, and he had not made any efforts to communicate with him about the case that day. The trial judge held that, under the circumstances, the defendant's counsel should not be allowed to refer to the absence of the physician. He said that the case was forced on to trial under circumstances where there was evidently some misunderstanding and he was going to charge the jury that, under the circumstances under which this case went to trial, they must draw no inference one way or the other from the absence of the physician. Nevertheless, the Appellate Division holds that this was reversible error. It says that it thinks it is a well-established rule of practice that where a witness who bears the relation to a party such as the physician bore to the plaintiff in this case, and such witness is not produced on a trial, the opposing counsel may call attention to the fact, and comment on it, with a view of having the jury infer the witness was not called because his testimony would not have been favorable to the plaintiff's case. This seemed the more proper in this particular case because the plaintiff, on his cross-examination, had under oath sought to explain such absence and failure to testify, and the jury had the full benefit of that explanation. The statement of the trial court as to what occurred before the jury was impaneled, and before the case was on trial, could not be substituted for evidence.

The Jury and Expert Testimony.

The Supreme Court of Iowa, in the personal injury case of Madden vs. Saylor Coal Company, holds that an instruction given the jury, the effect of which was to permit the jury, instead of the medical witnesses, to determine the materiality and importance of the facts embraced in a hypothetical question, was in this respect erroneous. The only province of the jury is to determine whether the statements are true. If found to be so, weight may be given to the testimony of the witnesses; but, if found untrue, they are not to be considered. Again, the court says that the company called physicians who had made a physical examination of the plaintiff, who testified as to his physical condition as it appeared to them from their examination. Among other things, they testified as to the comparative length of his legs, and also as to certain marks on one of his thighs, and as to the appearance and condition of his flesh. The jury was instructed that expert testimony is appropriate when the subject matter of the inquiry is such that without such assistance inexperienced persons are unlikely to prove capable of forming a correct judgment on it; that the jury is to determine the weight to be given to such testimony, and that while it is proper for the jury to consider it, and give it such weight as it may think it justly entitled to, considering the amount of skill and knowledge possessed by the witnesses giving such testimony, the jury should, however, consider it with caution. But the court is of the opinion that there was nothing in the testimony of the physicians in this case calling for the caution given in this instruction, or the statement that their testimony could not overthrow the testimony of witnesses testifying from personal knowledge. Skilled physicians are clearly competent to testify to visible physical defects and are clearly better qualified to testify as to the probable effect of stated physical conditions than non-experts.

Exhibitions of Private Parts to Jury Not Allowable.

The Supreme Court of Iowa says that in the case of State vs. Stevens, where it affirms a conviction of rape, that the defendant testified that he was a miner, had been injured in his private parts, and had had his side crushed about sixteen years previous by coal falling in the mine, and that he had suffered a similar injury about seven years previous to the trial, and that, as a result, he had been without sexual desire since the first injury, and incapable of indulging in sexual intercourse. His counsel then requested the court to allow the jury to retire to a private room and examine him. The county attorney suggested that the jury might not be able to determine anything from an inspection, but that no objection would be urged against such an examination by one or more physicians. Counsel for the defendant responded that he wished the jury to have the best evidence, and, in reply to a question by the court as to whether he desired a commission of physicians appointed, responded that such was not the request; that he desired the jury to look at the parts. Thereon the request was denied, and, the Supreme Court thinks, properly so. The defendant's testimony, it says, did not indicate anything concerning the nature of his injuries, or that an examination would aid in determining his capacity. Moreover, such exhibitions are not tolerated in this state. Garvick vs. Railway (Iowa) 100 N. W. 498.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

New York Medical Journal.

May 25.

1 *Aerotherapy in Cold Weather in Tuberculosis and New Model of Window Tent. S. A. Knopf, New York.
2 Results of Excision of Hip in Tuberculosis of Joint. C. Ogilvy, New York.
3 *Corneal Burn by Direct Flame. M. Talmey, New York.
4 Serum Therapy and Serum Diagnosis in Syphilis. S. Politzer, New York.
5 Chemistry of Milk. L. L. Van Sylke, New York.
6 *Congenital Stenosis of Pylorus. J. J. Gilbride, Philadelphia.
7 Cream and Whole Milk Calculation. E. K. Shelmerdine, Philadelphia.
8 Case of Melanuria. F. Bierhoff, New York.

1. **Aerotherapy in Cold Weather.**—Knopf dwells at great length on the value of aerotherapy in the treatment of tuberculosis. He says that he has found tuberculosis to be benefited by judicious outdoor sleeping, even in very cold weather. He has never noticed that an acute or chronic catarrhal condition of the upper respiratory tract has been brought about or, if present, has been increased through cold pure air. But, he says, to force a tuberculous patient, who has but a few weeks to live, with no chance of recovery, to sleep outdoors in cold weather, against his wish and comfort and inclination, is utterly useless, unscientific and inhumane. Knopf also describes a new model of window tent, which was fully described and illustrated in THE JOURNAL, Jan. 19, 1907, page 214.

3. **Burn of Cornea.**—Talmey reports a case of severe burn of the cornea, by a flame directly striking the eye, which was treated with good results by frequent instillations of atropin and the application of a tepid solution of boric acid.

6. **Congenital Stenosis of Pylorus.**—Gilbride reports a fatal case occurring in an infant seven weeks old. Operation had been refused.

Medical Record, New York.

May 25.

9 *Antral Sinusitis as an Etiologic Factor in Production of Hay Fever. J. E. Schadle, St. Paul, Minn.
10 Clinical View of Ulcer of the Stomach. F. B. Turck, Chicago.
11 *Method of Reducing old Colles Fractures. C. A. McWilliams, New York.
12 *Blood Pressure in Compressed Air Workers. H. Brooks, New York.
13 Popular Education in Medical Matters. H. W. Wright, Astoria, N. Y.
14 *Inaccuracy of Dare's Hemo-alkalinometer. F. P. Vale, Washington, D. C.
15 *Pilocarpine in Pruritus. J. J. Reid, New York.

9. **Antral Sinusitis as Cause of Hay Fever.**—Schadle advances the theory that catarrhal sinusitis of the antrum of Highmore is an important etiologic factor in the causation of hay fever and some of the commoner forms of catarrhal disease of the nasal tract. He says that the affection does not occur in persons in whom the ostium maxillare is of the normal small size, but in those in whom the disease, malformation or injury has made the antrum opening of sufficient size to admit germs to the interior of the cavity. Under normal conditions, the opening is for purposes of ventilation only, and the cavity is sterile, the opening being securely protected by the tissues and hard to reach. The author has treated ninety-one cases by washing out and medicating the antrum, and has obtained the best of results in nearly all cases treated. Only one patient was not benefited. Most of the patients were entirely cured in from one to two weeks and remained so.

11. **Reducing Old Colles' Fractures.**—McWilliams uses for retracturing the bones a large monkey-wrench with the blades well padded. This is used to immobilize the upper fragment, resting against the projecting edge of the lower fragment. Thus a fracture in the line of the original injury may be produced with the expenditure of very little force. There is no strain in the structure of the wrist, and the injury to the tendons is very slight.

12. **Blood Pressures in Compressed Air Workers.**—Brooks has made a study of blood pressure in seventy-five compressed air workers before, during and after working in the caisson, and gives conclusions that are the opposite of those generally accepted, namely, that there is no marked rise in arterial pressure under compressed air. He finds that the changes in blood pressure after labor under a pressure of thirty-one pounds plus are practically the same as under the usual atmospheric pressure, and that about the relative space between the systolic and diastolic pressure exists in both conditions, being practically the same as in the normal atmosphere. Hence deleterious effects on the health of compressed air workers are not due to external pressure on the superficial vessels. Slight disturbance of the vascular distribution results from moderate increase or decrease of atmospheric pressure when slowly accomplished. Moderate degrees of heart or kidney disease need not contraindicate work under compressed air.

14. **Inaccuracy of Dare's Hemo-alkalinometer.**—Vale finds that practically there are a number of inaccuracies in Dare's method of ascertaining the alkalinity of the blood sufficient to render the method entirely useless.

15. **Pilocarpin in Pruritus.**—Reid recommends the use of pilocarpin in the treatment of pruritus vulvæ and other forms of this affection, in doses of from ⅛ to ¼ grain (0.008-0.016).

Boston Medical and Surgical Journal.

May 23.

16 *Borderland of Medicine and Surgery. R. H. Fitz, Boston.
17 Physical Training in Boston Public Schools. J. B. Fitzgerald, Boston.
18 Medical Supervision Versus Medical Inspection of Public Schools. T. F. Harrington, Boston.
19 Physical Welfare of Public School Children. G. S. C. Badger, Boston.
20 School Hygiene. S. H. Durgin, Boston.

16. **Borderland of Medicine and Surgery.**—Dr. Fitz gives a very excellent review of the conditions in and the development of medicine that led up to the existence of the borderland cases, showing how specialism sprang from such cases, and pointing out the good that has accrued in many instances, from the invasion of the borderland by the surgeon. Both the surgeon and the physician, he says, are in consequence better trained and the necessity of the clinical laboratory is daily made more evident. Many problems have been solved in the laboratory, and many such problems are to be found within and without the borderland. And the more thorough the preparation of the physician and the surgeon, the more skilful and beneficent they are, the more exact and the more productive their science.

Lancet-Clinic, Cincinnati.

May 25.

21 Case of Toxemia in Pregnancy. D. M. Hall, Memphis, Tenn.
22 Treatment of Typhoid. W. Walley, Richton, Miss.
23 *Exophthalmic Goiter. F. M. Miller, Peoria, Ill.
24 Hair, Gray and Gone. E. S. McKee, Cincinnati.

23. **Exophthalmic Goiter.**—Miller reports three cases. All the patients were cured by means of the Roentgen ray and an iodin free diet. Thyroidectin was tried but failed to give any relief. An interesting feature in connection in one of these cases was the fact that the patient gave birth to twins at the seventh month of gestation and each child had a greatly enlarged thyroid gland.

St. Louis Medical Review.

May 18.

25 Early Diagnosis in Tuberculosis. W. Porter, St. Louis.
26 Tuberculin as Diagnostic Agent in Pulmonary Tuberculosis. L. M. Warfield, St. Louis.
27 Therapeutic Means for Relief of Spasm. W. C. Abbott, Chicago.

American Journal of Obstetrics, New York.

May.

28 *Prophylaxis and Treatment of Postoperative Phlebitis. A. Brothers, New York.
29 Postoperative Thrombophlebitis. H. C. Coe, New York.
30 *Mesosigmoiditis and Its Relation to Gynecologic Affections. E. Ries, Chicago.
31 Indications for Correcting Uterine Retrodisplacement. R. S. Hill, Montgomery, Ala.
32 *Ventral Fixation of the Uterus as Cause of Dystocia. R. H. Ingalls, Hartford, Conn.
33 *Backward Displacement of Uterus. E. W. Pinkham, New York.
34 *Case of Complete Rupture of Uterus During Labor. A. R. Small, Chicago.
35 Pregnancy and Normal Labor at Full Term After Abdominal Hysterotomy for Large Submucous Fibroid. H. N. Vineberg, New York.
36 Two Cases of Dystocia Due to Ovarian Cyst. M. W. Myer, Columbia, Mo.
37 *Causes of Sudden Death and Syncope During and After Parturition. A. C. Godfrey, Denver, Colo.

28. **Postoperative Phlebitis.**—The prophylactic treatment of postoperative phlebitis is summarized by Brothers as follows: 1. Careful attention to every aseptic and antiseptic detail in every operation, and adequate drainage in purulent or infected conditions. In gynecologic abdominal surgery this implies the use of the vagina or lower portion of the abdominal incision, or even the removal of the uterus for purposes of efficient drainage. The Fowler elevation of the bed is a useful postoperative adjunct to carry out this end. Some operators, even in this class of cases, will urge their patients early out of bed with a view to prevention of postoperative phlebitis. 2. In aseptic, nonpurulent intra-abdominal conditions which are submitted to other than fixation operations the occurrence of postoperative phlebitis will be reduced in frequency by getting such patients out of bed before the end of the first week. In the treatment of postoperative phlebitis Brothers advises absolute rest, with elevation of the affected limb. He cautions against friction and massage.

30. **Mesosigmoiditis.**—Ries reports the case of a young woman, previously healthy, who was infected in the course of a labor. This necessitated an operation during which a cyst of the left ovary and chronically inflamed tubes were removed. Six months later a laparotomy was performed to relieve an intestinal obstruction. The cause of the obstruction was found to be a band located high up in the abdominal cavity and having no connection with the sexual tract. A second laparotomy had to be done within twenty-four hours because of symptoms of obstruction and at the operation there was found a volvulus of the sigmoid due to mesosigmoiditis. After this volvulus was untwisted there was complete relief, and the patient made a speedy and uneventful recovery.

32. **Ventral Fixation.**—Ingalls reports three cases of ventral fixation seen by him, in which this operation interfered seriously with the course of pregnancy. In nine of these cases proper symmetrical dilatation of the uterus failed to take place. The fundus remained where it had been fastened to the anterior wall, and the entire dilatation was at the expense of the posterior wall, causing a great thinning out of the tissue. In two cases there resulted a rupture of the wall of the uterus in the woman's attempt to deliver herself.

33. **Backward Displacement of Uterus.**—The basis of Pinkham's paper is a series of 341 cases of retroversion and retroflexion, occurring among 1,730 women, or about 1 in 5 cases. He concludes that the most frequent cause of retrodisplacement is parturition with its sequels. The trouble may arise from trauma, or from some error in the treatment of the recently delivered woman. Of the 341 patients 93 were followed a year or more. Of these 60 were treated by the pessary; 11 being completely cured, that is, after the pessary was removed the uterus remained in place. Forty-six patients were benefited and 3 were not benefited at all and refused operation. Pinkham believes that in most cases non-operative treatment should be tried first. When the uterus can not be replaced, operative procedures are demanded. In his series 31 patients operated on were watched for six months or more. In 23 a ventral suspension was done; an Alexander operation was done in 3 cases, and in 5 cases the uterus was suspended by the transplanted round ligaments according to the author's method. There were 8 failures, 6 of ventral suspension; one of Alexander's and one of transplanting the round ligaments. In the latter case the uterus was so heavy that it sagged, stretching the round ligaments until they were unable to hold up the organ.

34. **Rupture of Uterus.**—In the case reported by Small, the uterus was ruptured from the external os to the fundus on the left side, between the folds of the broad ligaments. The broad ligament was also ruptured. As the tear was ragged and irregular, a hysterectomy was decided on, but the patient died before the operation could be completed.

37. **Sudden Death During Parturition.**—Godfrey reports a case of death from pulmonary embolism during labor.

Chicago Medical Recorder.
April 15.

38 Medical Treatment of Hemorrhage. G. W. Webster, Chicago.
39 Serum Treatment of Scarlet Fever. H. W. Cheney, Chicago.
40 Trabeculated Bladder. G. Kolischer and L. E. Schmidt, Chicago.
41 Determination of a First-class Risk. R. Sonnenschein, Chicago.
42 Methods of Calculating Proteid and Energy in Infant Feeding. T. G. Allen, Chicago.
43 Wounds of Cranium. C. Adams, Chicago.

The Military Surgeon, Carlisle, Pa.
May.

44 *Classification and Treatment of Burns. C. P. Kindleberger, U. S. Navy.
45 Endurance Test at Camp Tacoma. R. S. Woodson, U. S. Army.
46 *Prolonged Artificial Respiration with Apparent Drowning. J. W. Trask, U. S. P. H. and M.-H. S.
47 *Use of Yeast in Genitourinary Work and Gynecology. T. P. Grant, Kentucky State Guard.
48 English, German and French Conceptions of Colonial Prophylaxis in East Africa. H. S. T. Harris, U. S. Army.
49 The Base Hospital in Cuba. W. H. Brooks, U. S. Army.
50 Report of Committee on Public Service Medical School—1906. J. VanR. Hoff, U. S. Army.
51 Description of an Electric Incubator for Use Aboard Ship. R. C. Holcomb, U. S. Navy.
52 Amputation of the Thigh Under Hyoscin-Morphin-Cactin Anesthesia. H. G. Ebert, U. S. P. H. and M.-H. S.

44. **Treatment of Burns.**—Kindleberger advocates the use of picric acid solution in the local treatment of all burns, no matter how severe or extensive.

46. **Prolonged Artificial Respiration.**—Trask reports two cases of apparent death from drowning in which prolonged artificial respiration restored life. In one case the first sign of life was observed after artificial respiration had been carried on for one hour and twenty minutes. It was kept up for one hour and forty-eight minutes in all. In the second case competent natural respiration was restored two hours after the boat had capsized.

47. **Use of Yeast in Genitourinary and Gynecologic Cases.**—Grant has used yeast in over a dozen cases with most gratifying results. The yeast was used in liquid form and as pencils or crayons.

Bulletin of the Johns Hopkins Hospital, Baltimore.
May.

53 *Suture of Blood Vessels. S. H. Watts, Baltimore.
54 Boston Medicine 100 Years Ago and a Notable Physician of the Last Century. J. G. Mumford, Boston.
55 *Adenoma of Island of Langerhans. H. F. Helmholz, Baltimore.

53. **Suture of Blood Vessels.**—Watts has made a very careful clinical study of the suture of blood vessels, and carried on a series of experiments on dogs in order to determine the value of this procedure. Of 31 experiments on the vessels of the neck 28 were successful, whereas of 12 experiments on the femoral vessels only 2 were entirely successful. This discrepancy is not difficult to explain. Wounds in the neck are inaccessible to the dog's teeth, and can be readily bandaged, the wounds being thus kept clean and dead space obliterated. In the groin, however, it is very difficult to apply a bandage which will remain in place, obliterating the large dead space which is so apt to be present and preventing movements of the leg which interfere materially with a successful vessel suture. The results show conclusively that completely divided vessels can be sutured with almost uniform success, when the aseptic technic is good. The intima can be included in the suture with impunity, the application of the suture being thus greatly facilitated.

55. **Adenoma of Langerhans' Island.**—Helmholz by chance discovered an adenoma in the pancreas while examining the tissue as a matter of routine. He believes that the tumor arose from the cells of the islands of Langerhans because of the anastomosing arrangement of the acini, the intimate relation of the capillaries to the epithelium in some parts of the tumor, and the characteristics of the tumor cell.

Journal of the Medical Society of New Jersey, Orange.
May.

56 Chronic Gastrointestinal Diseases of Infants. F. H. Glazebrook, Morristown, N. J.
57 *Evils Besetting Medical Practice. L. Emerson, Orange.
58 Eye Symptoms of Affections of the Accessory Sinuses of the Nose. C. F. Adams, Trenton.

57. **Evils Besetting Medical Practice.**—Emerson says that the greatest evil besetting medical practice is lack of organization. He urges physicians to join their state and national associations and to influence their neighbors to do likewise.

New Orleans Medical and Surgical Journal.
May.

59 *An American School of Tropical Medicine. Shall There Be One? Where Shall It Be Located? What Shall Be Its Organization? I. W. Brewer, Fort Huachuca, Ariz.
60 *Spina Bifida. E. D. Fenner, New Orleans.
61 Handling and Diet of New-born, With Notes on Goat's Milk. L. G. LeBeuf, New Orleans.
62 Two Cases of Infected Wounds of Hand and Forearm Treated with Bier Vacuum Cups. P. B. Salatich, New Orleans.

59. **American School of Tropical Medicine.**—Brewer claims that such a school should be located in New Orleans, because there is an abundance of material there for the study of tropical diseases, and if a hospital were established to treat such cases the clinical material would rapidly increase. Its organization, he states, should be on the lines outlined by Manson.

60. **Spina Bifida.**—Fenner reports two cases of spina bifida in which a successful operation was done. One patient was ten days old, the other two months. In both cases the tumor was situated in the sacrolumbar region.

Journal of Nervous and Mental Diseases, New York.
May.

63 *Case of Epilepsy Associated with Acromegaly. W. T. Shanahan, Sonyea, N. Y.
64 Gliomatosis of the Pia and Metastasis of Glioma. W. G. Spiller, Philadelphia.
65 *Is Epilepsy a Disease of Metabolism? J. F. Munson, Sonyea, N. Y.
66 Diagnostic Value of Lumbar Puncture in Psychiatry. J. L. Pomeroy, New York.

63. **Epilepsy Associated with Acromegaly.**—Shanahan's patient manifested the first symptoms of acromegaly when she was 22 years old. Four years later she had her first epileptic seizure. This seizure was apparently grand mal in type. There were no aura. The patient is now 31 years of age and the acromegaly is progressing in the usual manner.

65. **Epilepsy.**—Munson believes that the epileptogenous change affects the chemical structure of the cell, and he doubts that the lesion can be made visible by the methods of the pathologist. He says the fact that some variation from the normal is almost always reported makes one rather hopeful that further work along biochemical lines will in the end bring a solution of the problem.

Journal of Cutaneous Diseases, New York.
May.

67 *Tuberculous Infection of the Skin, and One Allied Case. T. C. Gilchrist, Baltimore.
68 Pigmented Spots in the Sacral Region of White and Negro Infants. C. Herrman, New York.
69 Intramuscular Injections of Mercury in Treatment of Syphilis. E. H. Shields, Cincinnati.
70 New Comedo Extractor. J. F. Schamberg, Philadelphia.

67. **Tuberculous Infections in Skin.**—Gilchrist reports a case of primary tuberculosis of the sole of the foot, the diagnosis being confirmed by a microscopic examination of the tissue and the finding of tubercle bacilli. An interesting point in the history of the case was that there was living in the house with the same patient a phthisical individual who practiced bad expectorating habits, which probably accounted for the source of the infection. In another case of tuberculosis of the back of the right hand the patient was working at a bench with a consumptive. The patient had a scratch over the knuckle; this was followed later by a pimple, which finally took on the typical character of tuberculosis varicosa cutis. Tubercle bacilli were demonstrated in the tissue. Gilchrist also reports a case of tuberculous tumors of the skin with lesions on the lower extremities simulating *Erytheme induré scrofuleux* in a young negro girl, and a case of acne necrotica.

Therapeutic Gazette, Detroit.

April 15.

71 Symptomatology and Treatment of Toxemia of Pregnancy. W. H. Wells, Philadelphia.
72 Treatment of Eclampsia. J. C. Hirst, Philadelphia.
73 The Urine in Toxemia of Pregnancy and Eclampsia. C. Foulkrod, Philadelphia.
74 External Inflammatory Diseases of the Eye. L. F. Appleman, Philadelphia.
75 Relation of the Volume of Air Inspired to the Rise of Temperature in Neurogenic Fever. I. Ott and J. C. Scott, Philadelphia.
76 *Is the Use of Potassium Iodid Admissible in Pulmonary Tuberculosis? H. R. M. Landis, Philadelphia.
77 *Local Use of Magnesium Sulphate Solution in Inflammation. H. Tucker, Philadelphia.
78 Anesthesia and Methods Producing It. H. B. Ingle, Philadelphia.

76. **Potassium Iodid in Tuberculosis.**—Landis says that inasmuch as it is apparent that an incipient or quiescent lesion may be aroused into activity by the use of potassium iodid, it would seem that the use of this drug in the more advanced stages of tuberculosis might be productive of harm rather than good. As iodid of potassium fulfills no distinct indication in the treatment of tuberculosis and there is reasonable evidence as to its dangers, the safer course would be to avoid it altogether. When, however, tuberculosis and syphilis coexist, iodid of potassium is often necessary, and under these circumstances may be given.

77. **Magnesium Sulphate in Inflammation.**—Tucker has used magnesium sulphate as a local application with gratifying success in about thirty cases. The application consisted of a saturated solution of magnesium sulphate and water applied in the form of a wet compress and left in place for twenty-four hours. The parts are then washed with water and the dressing is reapplied, if indicated. The majority of the cases reported in which the application was used were gonorrheal in origin, such as orchitis, epididymitis, and rheumatism. It was also used successfully in two cases of erysipelas, one case of alcoholic neuritis of the lower extremities, and in two cases of traumatic neuritis. In these cases, however, the effect was not curative but palliative.

Journal of the Missouri State Medical Association, St. Louis.

April.

79 Prolapse of Sigmoid Flexure. J. M. Allen, Liberty, Mo.
80 Pathogenesis of Chorea Minor. M. Goldman, Kansas City, Mo.
81 Importance of Postoperative Treatment in Diseases of the Rectum. W. H. Stauffer, St. Louis.
82 Lessons to Be Drawn from 43 Recent Operations on the Stomach. W. Bartlett, St. Louis.
83 Treatment of Adenoids by the General Practitioner. W. E. McKinley, Denver, Mo.
84 Method of Radical Relief of Cases of Deafness of Long Standing Abandoned as Hopeless. R. Barclay, St. Louis, Mo.
85 Endothelioma of Ovary. E. D. Porterfield, St. Louis, and J. D. Porterfield, Jr., Cape Girardeau, Mo.
86 Primary Ligation of Internal Iliac Arteries in Hysterectomy. N. O. Harrelson, Kansas City, Mo.

The Post-Graduate, New York.

April.

87 Two Cases of Thoracic Aneurism. W. H. Porter, New York.
88 Obstetric Hemorrhages and Their Treatment. H. P. DeForest, New York.
89 Modern Obstetric Technic. G. L. Brodhead, New York.
90 Management of Mother and Child During the Puerperium. W. H. W. Knipe, New York.
91 Case of Acute Malignant Endocarditis. T. H. Coffin, New York.
92 History Blanks. F. Cabot, New York.

Medical Fortnightly, St. Louis.

April 10.

93 Lupus Erythematous. J. V. Shoemaker, Philadelphia.
94 Management of Pregnancy, Labor and the Puerperium. J. C. Murphy, St. Louis.
95 Résumé of Theories in Regard to Etiology of Chronic Enlargement of the Prostate. H. J. Scherck, St. Louis.
96 What Shall We do With Charcot's Joints. S. G. Burnett, Kansas City, Mo.

April 25.

97 Caseous Maxillary Sinusitis. R. H. Johnston, Baltimore, Md.
98 Peritoneal Adhesions. B. A. McDermott, Omaha, Neb.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London.

May 11.

1 Early Symptoms of Mental Disorder. W. H. B. Stoddart.
2 *Vicious Circles. J. B. Hurry.
3 *Differential Diagnosis Between Ménière's Disease and Others Exhibiting Ménière's Complex of Symptoms. T. W. Parry.
4 Nine Cases of Carbolic Acid Gangrene. D. Wallace.
5 Early Specimen of Total Enucleation of Prostate Removed by the Late Mr. McGill. J. A. C. Forsyth.
6 *Nerve Degeneration and Regeneration. W. D. Halliburton.
7 Spirillosis of Domestic Fowls. M. F. Reaney.
8 Sterility in Man. A. Cooper.
9 *Strangulated Hernia in Infant. A. Mitchell.
10 *Secretion of Milk in Axilla. H. P. Godfrey.

2. **Vicious Circles.**—Hurry discusses vicious circles under the following classifications, based on etiology: Organic, symptomatic, infective, neurotic, chemical, mechanical, artificial and spurious. He says that the watchful practitioner may sometimes prevent the development of these vicious circles if he is thoroughly acquainted with the course diseases tend to follow, and at the right moment gives such aid as will check the morbid processes at work. The circles are really illustrations of cause and effect, such, for instance, as the occurrence of polydypsia and polyuria in diabetes, and dental caries being the cause of oral sepsis.

3. **Ménière's Disease.**—Parry reports a case of persistent Ménière's symptoms in which a cure was effected when all other methods of treatment had failed, by the simple insertion of a seton.

6. **Nerve Regeneration.**—Halliburton has given the subject of regeneration of nerves considerable study. As the result of this study he inclines to the belief that the Wallerian doctrine—that new nerve fibers are growths from the central ends of divided nerve trunks—is correct.

9. **Strangulated Hernia in Infant.**—The patient in Mitchell's case was six weeks old, breast-fed and previously healthy. The herniotomy was done under local anesthesia. The sac of the hernia was found to contain a large coil of small intestine, the cecum and the appendix. The patient recovered.

10. **Secretion of Milk in Axilla.**—Godfrey reports the case of a woman who has a well-marked mammary gland on each side, quite distinct from the principal mammary gland and extending to the axilla. Each of these glands has a distinct nipple, and from them there is always a free discharge of milk during the puerperium.

The Lancet, London.

May 11.

11 Nerve Degeneration and Regeneration. W. D. Halliburton.
12 Causes of Cardiac Motion and Disordered Action. A. Morison.
13 Treatment of Fractures in Vicinity of Joints. W. A. Lane.
14 *Opsonic Index in Sane and Insane. C. J. Shaw.
15 Metastases in Malignant Disease of Viscera. C. O. Hawthorne.
16 *Paratyphoid Fever Following Removal of Ovarian Cyst. W. Thyne.
17 *Perforation in Typhoid and Its Relation to Blood Pressure. A. L. Sheppard.
18 Status Lymphaticus. L. Vintras.
19 Congenital Diverticulum of Stomach and Duodenum in Physiologic Hour-glass Stomach. W. H. Horrocks.

14. **Opsonic Index in Sane and Insane.**—Shaw summarizes his article as follows: As the insane are particularly liable to tuberculous infection, a comparison of the average indices recorded in the sane and insane and also in the various classes of insane patients would indicate that the opsonic power of the blood serum can be used as a measure of liability to infection and that a low opsonic index precedes infection. The injection of a small dose of tuberculin TR in healthy persons produces no negative phase to the tubercle bacillus and, therefore, may be used as a method of diagnosis. A smaller dose of tuberculin, however, will more often produce a negative phase in a predisposed person than in one less liable to tuberculous infection. To determine the value of a negative phase after injection the daily variation in opsonic power as well as its level at the time of injection must be estimated. For this reason a number of consecutive observations are necessary; a single or a number of isolated observations is not sufficient. The average opsonic indices of healthy individuals varies little to different organisms. The injection of a large dose of tuberculin even in healthy individuals causes a fall in opsonic power to other organisms than the tubercle bacillus. This explains the liability of tuberculous patients to secondary infection. For purposes of differential diagnosis by the production of a negative phase a very small dose must be administered. Large doses of tuberculin can be injected into healthy persons without producing constitutional symptoms. Amount of dose, therefore, may be a matter of diagnostic significance as a small dose causes a reaction in infected cases.

16. **Paratyphoid Following Removal of Ovarian Cyst.**—What is believed to be the first case of this kind on record is reported by Thyne as having occurred in a woman aged 38, from whom he removed an ovarian cyst of about the size of a football. The paratyphoid manifested itself on the twenty-first day, the diagnosis being confirmed by the agglutination test, which proved negative to typhoid and positive to paratyphoid.

17. **Perforation in Typhoid.**—According to Sheppard, a rise of blood pressure occurring in the course of typhoid may be regarded as positive evidence of perforation, although, he says, that a stationary pressure is no indication that the catastrophe has not occurred.

Journal of Tropical Medicine, London.

May 1.

20 Peculiar Blood Condition, Probably Parasitic, in Fowls. A. Balfour.
21 Food Plants Cultivated by the Umbundu-Speaking Natives of Portugese West Africa. F. C. Wellman.

Indian Medical Gazette, Calcutta.

April.

22 Recent Advances of Knowledge in Connection with Rabies. J. W. Cornwall.
23 Malta Fever in the Punjab. C. N. C. Wimberley.
24 Occurrence of Ameba Coli in Port Blair, Andaman Islands. A. R. S. Anderson.
25 Cerebrospinal Meningitis in Bhagalpur in 1906. J. M. Woolley.
26 *Liquor Sodæ Chlorinatæ. Anukul Chandra Basu.
27 Fatal Case of Snake Poisoning. G. G. Hirst.
28 Malarial Pneumonia. J. H. Burgess.
29 The Plague in Kashmir. A. Mitra.
30 *Two Native Remedies for Acute Dysentery. H. E. Banatvala.
31 Transverse Fracture of Patella. L. G. Fischer.
32 *Value of Creosote Inunction in Medicine. H. S. Wood.
33 Sarcoma of the Temporal Fascia. E. O. Thurstone.
34 *Two Cases of Ascaris Lumbricoides. C. J. R. Milne.

26. **Liquor Sodæ Chlorinatæ.**—Basu has found this solution an excellent dressing for all sorts of unhealthy and badly sloughing ulcers, using the solution in the strength of 1 to 20.

30. **Remedies for Dysentery.**—The two native remedies referred to by Banatvala are the juice of the leaves of *Jasminum sambac*, and a mixture of *Chinai sakkar*, cardamon and sugar. The latter is a household remedy among the Parsees in Bombay.

32. **Creosote.**—Wood has noted excellent results from the use of creosote as a preventive of dysentery, and in the treatment of phthisis, pneumonia and malaria. The drug was administered by inunction. Thirty minims of creosote were mixed with vaselin or olive oil, and half of this was rubbed vigorously into the axillæ and groins in the morning and half in the evening. A more detailed report is promised at another time.

34. **Ascaris Lumbricoides.**—The two cases reported by Milne are of some interest in view of the number of parasites present in the first case, and their unusual location in the second case. Both the patients were insane. The first patient passed altogether about 630 worms, weighing about four pounds, in seven days. He did not seem to be inconvenienced by their presence, and the removal of the worms had not the slightest effect on his mental condition. In the second case the worms were not discovered until at the postmortem on the patient. The number and location of the worms were as follows: Duodenum and jejunum, 51; common duct, 20; gall bladder, 5, and liver, 19.

Glasgow Medical Journal.

May.

35 *Sarcoma of Right Pleura and Lung. A. Napier and J. Anderson.
36 *Treatment of Sciatica with Saline Injections. A. G. Hay.
37 Marriage Laws and Customs of West Australian Aborigines. D. M. Bates.

35. **Sarcoma of Pleura and Lung.**—The patient, whose case is reported by Napier and Anderson, was only 23 years old. The tumor was confined to the pleura, right side of the chest, and the lower part of the interior mediastinum; the trachea, esophagus and blood vessels escaping invasion. Tumor nodules were found in the left suprarenal and kidney and in the liver. The case terminated fatally six months after its onset. The original diagnosis was chronic pleurisy. There was also a pericarditis, which is one of the common complications of malignant intrathoracic tumors.

36. **Saline Injections in Sciatica.**—Hay reports four cases in which the treatment of sciatica by means of saline injections proved effective. He says that several injections may be required to effect a cure, but the improvement after the first injection has so far been sufficient to make the patients willing to return for further treatment. Hay makes the injection in the gluteal fold midway between the great trochanter and the tuberosity of the ischium.

Annales d. Mal. d. Org. Gén.-Urinaires, Paris.

Last indexed, XLVII, page 972.

38 (XXIV, No. 12, pp. 881-960.) *Is the Intermittent Albuminuria of Children due to Nephritis? (Alb. in. de l'enfance.) H. Dauchez.
39 (No. 13, pp. 961-1040.) *Supposed Recurrences After Prostatectomy for Simple Hypertrophy. (Des prétendues recidives après prostatectomie.) André.
40 *Traumatic Lesions of the Testicles and Industrial Insurance. (Lésions accidentelles des testicules.) V. Balthazard.
41 (No. 14, pp. 1041-1120.) *Pains in the Bladder in Women. (Cystalgies des femmes.) Rochet.
42 (No. 15, pp. 1121-1200. Experimental Study of Effects of Ligature of Renal Artery and Vein. (Lig. de l'art. et de la veine rén.) M. Jungano. Commenced in No. 12.
43 (No. 16, pp. 1201-1280.) *Treatment of Tuberculosis of the Testicle. (Tub. du test.) L. Batut.
44 Treatment of Oxalate Gravel. (Gravelle oxalique.) Dedet.

38. **Intermittent Albuminuria in Children.**—Dauchez analyzes a number of cases of various types of intermittent albuminuria in children with apparently healthy kidneys. He is convinced that prolonged observations in such cases will always reveal a partial nephritis developing in a soil predisposed by some inherited taint.

39. **Recurrence After Removal of Prostate for Simple Hypertrophy.**—André relates a case which confirms the assumption that when recurrence is observed under these circumstances the trouble is in reality of a cancerous nature instead of simple hypertrophy. Motz and Albarran estimate at 10 per cent. the proportion of cases of hypertrophy due to unsuspected malignant disease. André's patient is a farmer, 62 years old, whose prostate was removed in 1903 by the perineal route, for supposed simple hypertrophy. Recurrence soon developed, and the malignant nature of the affection is now beyond question, but the patient is still in good health and has a good appetite, his only complaint being that it is difficult to introduce the catheter.

40. **Traumatic Lesions of Testicles and Industrial Insurance.**—Balthazard reviews two recent judicial decisions in France in regard to the compensation for insured wage earners after injury of the testicles in an industrial accident. One decision rejected completely the plea for indemnity and imposed the costs of the suit on the plaintiff. The other decision—in the same court, but by a different judge—awarded a pension of 58 francs from the day of the accident, about one-twenty-fifth of the salary the man had been receiving. In this case one testicle had been crushed by a kick from a horse. Balthazard's conclusions from his study of the physiology of the testicles are that the only traumatic lesions of the testicle which might possibly incapacitate a workingman are those which entirely abolish the internal secretion. The consequences of the loss of the internal secretion of the testicles are more serious the younger the victim. The amount of incapacity he estimates at 25 per cent. for an adult between 30 and 40; up to 50 per cent. for youths under 20, and down to 10 per cent. or zero for persons over 50.

41. **Cystalgia in Women.**—Rochet thinks that the factors for a possible bladder trouble are more numerous in women than in men, but he adds that more can be done for the relief of cystalgia in women than is generally supposed. Persevering differentiation and treatment of the main factors will sometimes cure even after the physician has long given up hope. In case of the possibility of an old latent gonorrheal or puerperal infection, instillation and lavage with disinfectants may give prompt and brilliant results. In case of uremia or gout, general treatment is required, restricting local measures to mild cauterization of the neck of the bladder with a 1 in 50 or 1 in 100 solution of silver nitrate. In case of a possible influenzal origin for the cystalgia, local disinfection may be useful, but quinin sulphate, 0.2 gm (3 grains) morning and evening for a week, then suspending for a week and recommencing, is, he states, the true internal treatment for these cases, giving sometimes prompt and unexpected relief and cure. Concomitant gynecologic affections should be treated as indi-

cated. If the bladder trouble persists, local treatment may be needed. Vaginal or rectal sedative suppositories and hot injections are generally beneficial whatever the cause of the cystalgia. The injections should be made with water at 104 F. or still hotter, using 2 or 3 quarts, and allowing several minutes for the flowing of the water. Treatment of the general nervous system is important. Hygiene, hydrotherapy and possibly bromids or valerian internally will render great service. Even although the cystalgia may never be entirely cured, it may be kept within bearable bounds with perseverance on the part of patient and physician. In case of absolute failure, surgery is the only resort, and even a comparatively insignificant operation such as slitting the sphincter, may give permanent relief. This was the result in Rochet's experience in one case in which the patient had suffered for years from intense cystalgia. Incontinence of urine generally results from this operation, but as the urine escapes by the natural outlet there is no irritation from it. As a last resort Rochet advises resection of the perineal branch of the internal pudic nerve.

43. **Tuberculosis of the Testicle.**—Batut reports 10 cases of tuberculous processes in the testicle, all cured by curettement and cauterization of the lesions or by epididymectomy.

Revue de Gynécologie, Paris.

Last indexed page 1905.

45 (XI, No. 2, pp. 195-384.) •Cancer of the Ovary in the Course of the Evolution of Cancers of the Stomach, Intestine and Biliary Passages. (Cancer de l'ovaire, etc.) Goullioud.
46 Uterine Cysts. (Kystes de l'ut.) S. Mercadé.
47 •Fistulas Between Stomach and Colon. (Des fistules gastro-coliques.) G. Chavannaz.
48 The Senile Appendix. (L'app. senile.) E. Mériel.

45. **Cancer of the Ovary Accompanying Cancer Elsewhere.**—Goullioud emphasizes the frequency of bilateral malignant disease in the ovaries during the course of cancer in the stomach, intestine or biliary passages, or after its removal. As a rule, he says, ovarian cancer is a metastasis. His experience with five cases teaches the extreme malignancy of ovarian tumors coinciding with cancer elsewhere. It also teaches the necessity for examining the ovaries in operating for cancer elsewhere, and for examining the stomach and intestine in case of ovarian cancer.

47. **Gastrocolic Fistula.**—Chavannaz comments on the scant attention paid to this condition in the literature since the first description was published in 1857. In 47 cases on record the fistula was of cancerous origin; in 38 the cancer was in the stomach. In 7 others there was merely an ulcer, and in 4 more this was probable. In 5 others the fistula was the result of a tuberculous process in the stomach or intestine, and in 2 of an abscess in the intestine. The total 79 cases are summarized and jejunostomy is advised for patients suffering from inanition. Colocolostomy may be preferable for those with fecaloid vomiting.

Semaine Médicale, Paris.

49 (XXVII, No. 18, pp. 205-216.) Treatment of Aneurisms on the Limbs, the Result of Firearm Wounds. (Anévrysmes des membres.) F. Lejars.
50 (No. 19, pp. 217-228.) Technic for Interval Appendectomy Free from Danger of Eventual Eventration. (Appendicectomie à froid permettant d'éviter l'éventration.) Le Bec.
51 Case of Third Testicle. (Triorchidie.) J. Potarca.
52 Discussion of Regulations Reorganizing the Sanitary Service in the German Army. (Service de santé de l'armée all. en campagne.) Commenced in No. 18.

Berliner klinische Wochenschrift.

53 (XLIV, No. 13, pp. 361-384.) Dislocation of Hip. (Hüftgelenksluxationen.) L. R. von R. Rydygier. Clinical lecture.
54 Inaction of Complex Hemolysins in Solutions Without Salt, and Its Cause. (Unwirksamkeit der kompl. Hämolysine.) A. Ferrata.
55 •Therapeutic Injection of Oxygen into the Knee. (Therap. Sauerstoffeinblasungen.) L. Rauenbusch.
56 •Graphic Record of Pulse Pressure. ("Turgo-Sphygmographie.") E. v. Koziczkowsky.
57 •Inherited Tendency to Heart Affections in Youth. (Myocardismus und Endocardismus hereditarius.) G. Galli.
58 Thyroid Treatment of Hay Fever. (Heufieber.) P. Heymann.
59 •Congenital Strictures of the Urethra. (Angeb. Strikt. der Harnröhre.) C. Posner.
60 Present Status of Treatment of Cutaneous Tuberculous Processes. (Hauttuberkulose.) A. Alexander.

55. **Therapeutic Injection of Oxygen into the Knee.**—THE JOURNAL mentioned on page 1141 of Vol. XLVII, 1906, Hoffa's recommendation of injection of oxygen into a joint to facilitate Roentgenoscopy. The various parts of the joint show far more distinctly when this is done. Rauenbusch here states that the injections of oxygen for this purpose were followed by the surprising experience that the patients returned after a few days, begging to have the oxygen injected again, as it had arrested all pain in the diseased joint and the affection seemed better in every way. The measure was then tried for therapeutic purposes, and he here relates in detail his experiences with several cases of synovial tuberculosis, etc. Subjective improvement was manifest in every instance, and in some cases was followed by evident objective improvement. In 5 cases of chronic arthritis no other treatment was attempted and improvement was soon evident. The injections were repeated at intervals of from 1 to 3 weeks, as the benefit seemed to subside after a certain interval. For the present the treatment is empiric only, but the obstinate persistence of affections of the knee justifies a trial. Sufficient time has not yet elapsed to determine whether or not the improvement will progress to ultimate cure. Hoffa has also found injection of oxygen beneficial after evacuation of a hemorrhagic effusion in the knee. The mechanical compression of the synovial membrane by the oxygen tends to prevent the reproduction of the effusion. Benefit might also be realized, he thinks, by injection of oxygen every 3 or 4 days after breaking up fibrous ankylosis, to prevent the parts growing together again. It can only be done, however, when the capsule is still intact, as otherwise the oxygen would diffuse through the tissues and the mechanical effect would be lost.

56. **Determination of Pressure of the Pulse by "Turgo-Sphygmography."**—This communication from Strauss' clinic at Berlin describes with illustrations a little instrument which it is claimed records the behavior of the pulse more accurately than other means to date. It is a combination of Gaertner's tonometer and Oehmke's turgograph, and seems to be free from the inconveniences of the ordinary sphygmograph. It shows with special precision the lower part of the pulse wave, which is generally rather slighted in the ordinary pulse tracings. It is said to be particularly valuable for oversight of the pulse during general anesthesia.

57. **Inherited Tendency to Heart Disease.**—Galli has observed at Rome a family in which the father had succumbed at 45 to heart disease, and the four children all present signs of low resisting power on the part of the myocardium. He applies the term "inherited myocardism" to the condition, which is characterized by symptoms of weakness of the heart muscle. In Huchard's "inherited aortism" the tendency is to high blood pressure, with general vigor, but it leads in time to pathologic changes in the blood vessels in the remotest regions, with arteriosclerosis. In the "inherited myocardism" there may be chronic pathologic changes in the myocardium, but arteriosclerosis is not necessary for their development. Besides these two types there may be an "inherited endocardism," and this may entail valvular defects.

59. **Congenital Stricture of the Urethra.**—Posner protests against the general assumption that a stricture in the urethra must necessarily be due to preceding inflammation. He describes the case of a lad of 11, always healthy except for an attack of scarlet fever. In the summer of 1905 the boy suddenly presented symptoms suggesting pyelitis, that is, pains in the region of the right kidney, turbid urine, tenesmus and hematuria on one occasion. A kidney stone was surmised, but neither radioscopy nor palpation gave positive findings. The lower part of the abdomen protruded and there was considerable retention of urine. The catheter met with some obstacle in the region of the enlargement of the urethra, but it was easy to overcome this obstacle. Regular dilatation with progressively larger sounds soon put an end to the retention of urine and the urine cleared up. The case can be explained only by a congenital stricture in the urethra.

Deutsche medizinische Wochenschrift, Berlin and Leipsic.

61 (XXXIII, No. 16, pp. 617-664.) Immunity and Its Importance for the Practice of Medicine. (Immunitäts-Wissenschaft.) A. Wassermann.
62 •Nature and Treatment of Tendency to Gout. (Gichtische Anlage.) W. Ebstein.

63 Case of Auriculoventricular Tachycardia. (Atrioventrikulare Tachycardie.) J. Ribl.
64 Icterus with Cholecystitis from Passage of Bile from the Inflamed Gall Bladder Directly into the Vascular System. (Ict. bei Cholecystitis.) H. Eppinger.
65 Sensation of Vibration and Pressure Sense. (Vibrationsempfindung und Drucksinn.) H. Steinert.
66 Negative Results of Attempted Transmission of Leprosy to Animals. (Uebertragung der Lepra auf Tiere.) P. V. Jezierski.
67 Treatment of Experimental Trypanosomiasis. (Atoxylbehandlung der exp. Dourine.) W. L. Yakimoff.

62. **Nature and Treatment of Tendency to Gout.**—Ebstein regards gout as the result of a disturbance in the intermediary metabolism especially in the metabolism of nuclein, and probably located in the nuclei of the cells. Diabetes, he states, is the result of a disturbance in the metabolism of carbohydrates. Persons who suffer from gout in later life are liable to display certain morbid tendencies in childhood. Such children generally have a healthy aspect, perspire readily, have a good appetite but with a great tendency to indigestion, eczema and itching cutaneous affections, take cold easily, and are especially prone to recurring attacks of granular pharyngitis. Migraine is the most constant sign of the gouty tendency in early life; epistaxis in the morning is another sign, as also pains in the joints, dyspepsia and dizziness, signs of neurasthenia and, especially, acidity of the urine, with deposits of urates and uric acid. Other signs of the gouty tendency, even in the absence of actual gout, are variability of mood, depression and a certain disposition to dissimulation. It is important to detect the tendency to gout early and to insist on a simple mode of life with dieting as for obesity, restriction of carbohydrates, with plenty of albumin and fat. He regards vegetable albumin as fully equivalent to animal albumin in the diet. Alcohol should be entirely avoided, as also too much bread, sugar, sweets of all kinds, cake, puddings and other foods that tend to make fat. He adds that the physician is rarely able to impose this mode of life on patients who most need it, but he should never refrain from preaching it, and occasionally his advice may be taken. In any event he may be able to steer into safety the children in families with this tendency.

Münchener medizinische Wochenschrift.

68 (LIV, No. 14, pp. 649-712.) Superiority of Zigzag Incision for Appendicitis, for Femoral Hernia, for Ligature of External Iliac Artery, and for Extensive Intra-abdominal Operations. (Zuverlässigste Appendixschnitt, etc.) Riedel.
69 Prevention and Treatment of Fecal Fistula after Appendicitis Operations. (Kotfisteln nach App.-Op.) P. Janssen.
70 *Roentgen Treatment of Enlargement of the Prostate and its Technic. (R.-Behandlung der Prostatahypertrophie.) F. Haenisch.
71 *Properties and Aims of New Method of Urethroscopy. (Harnröhrenbesichtigung.) H. Goldschmidt.
72 *Active Hyperemia in Treatment of Arteriosclerotic Gangrene. (Akt. Hyperämie in der Behandlung der art. Gangrän.) W. Röpke.
73 *Healing after Fracture of Patella. (Heilungsergebnisse von Patellar-Frakturen.) H. Landwehr.
74 Congenital Dislocation of Patella. (Kong. Luxation der Pat.) H. Bogen.
75 Nail Affection with Black Discoloration in Syphilitics. (Onychia pigmentosa luetica.) H. Vörner.
76 Successful Tuberculin Treatment of Tuberculosis of Eye. (Tub. des Auges.) Erdmann.
77 Technic for Drawing Blood from Rabbit's Ear. (Blutentnahme aus dem Kaninchenohr.) O. Prym.
78 Tester of Sense of Contact, etc. (Sensibilitätsprüfer.) S. Auerbach.
79 Intratumoral Roentgen Treatment of Cancer. (Intratumorale Röntgenbestrahlung.) H. E. Schmidt.
80 *Semmelweis or Lister? Weckerling.

70. **Roentgen Treatment of Enlargement of the Prostate.**—Haenisch reviews what has been accomplished in this line by Moszkowicz and others since the first publications on the subject in March, 1905. He also describes his own experience and gives an illustrated description of what he thinks is the preferable technic. The patient assumes a partial knee-elbow position, the trunk resting on an adjustable cushioned support, and the arms and elbows on a lower cushion. The Roentgen tube is on an adjustable standard and folding arm, centering the rays in a lead glass speculum fastened in the rectum. By this arrangement the patient reclines comfortably and if he moves can not be injured, as there is nothing to hit against, while the tube does not become uncentered. The necessity of applying the rays to the bladder at the same time is emphasized by Haenisch, who also confirms the experience of others that the success of treatment is in inverse proportion to the duration of the affection. He does not describe his clinical experience further than to state that it has been very satisfactory. The distance between the anticathode and the entrance to the speculum was always about 27 cm.; the exposure was six minutes in length, and was repeated until from 6 to 8 exposures had been given in the course of 2 or 3 weeks. The bibliography of the subject is added.

71. **Improved Urethroscopy.**—Goldschmidt's urethroscope is constructed on the principle of Nitze's system of lenses. Water enters through the urethroscope and distends the urethra, thus opening it up for inspection. His experience with the new urethroscope has been very favorable, and has revealed many features of the urethra and entrance to the bladder which have hitherto escaped notice. It is especially instructive when the urethra is thus inspected while the rectum and prostate are being palpated. The findings, he states, throw new light on the functions of the genital organs. The new urethroscope renders galvanocauterization a simple and easy matter. He adds that it is astonishing how well the posterior urethra and bladder tolerate the injection of cold water. The details of the urethroscope are described and illustrated.

72. **Active Hyperemia in Treatment of Arteriosclerotic Gangrene.**—Röpke reports a case of arteriosclerotic gangrene of the toe in which the process continued a progressive course after exarticulation of the toe. There was no pulsation in the arteries of the foot and no bleeding from the wound. The patient was a man of 59 who had suffered from gout for 22 years. In dressing the wound one day very hot water was used, and the wound bled a little. Consequently hot foot baths were then given systematically every day, for 15 minutes or more, and within a week the arteries in the foot showed distinct pulsation. The wound gradually healed and, except that this foot is always colder than the other, the aspect of the skin and the pulsation are approximately the same as in the other foot. The hyperemia induced by the hot water extended only to the limits of the vital tissues, and thus differentiated the dead from the living tissue.

73. **Healing of Fractured Patella.**—Landwehr tabulates the ultimate results in 16 cases of fractured patella treated at Bardenheuer's clinic with suture or extension only, and reexamined after one or more years. The results confirm his previous assertions in regard to the advantages of extension treatment. Equally good results were attained with the bloodless measures as with the sutures, while the former avoids all the dangers inherent in surgical measures. The suture does not always produce perfect results by any means.

80. **Semmelweis or Lister?**—Weckerling wrote to Lister to inquire if he had been influenced by Semmelweis' writings in his discovery of the principle of antisepsis. Lister replied that he had never heard of Semmelweis or his work when he published his first announcements in 1863. Even when he visited Budapest twenty years later the name of Semmelweis was never mentioned. A short time after this, however, in 1883, a Hungarian physician in London made him acquainted with Semmelweis' writings.

Therapie der Gegenwart, Berlin.

Last indexed, pages 461 and 1387.

81 (XLVII, No. 10, pp. 438-480.) *Pylorospasm. (Pylorospasmus.) O. Heubner.
82 *Nature of Certain Bodily Disturbances in Hysteria and Their Importance as Guide to Treatment. (Wesen einige körperliche Störungen der Hysterie.) H. Curschmann.
83 Intravenous Strophanthin Treatment according to Fraenkel. (Intraven. Strophanthintherapie.) F. Mendel.
84 Advocacy of Spinal Anesthesia in Operative Obstetrics. (Narkose in der op. Geburtshilfe.) C. J. Gauss.
85 Hot Local Baths in Treatment of Gonorrhea. (Einfaches Hilfsmittel.) O. Buber.
86 The Tasks of Chemo-Therapy. (Aufgaben der Chemotherapie.) P. Ehrlich.
87 (No. 11, pp. 481—528.) *Tuberculosis and Pregnancy. (Tub. und Schwangerschaft.) J. Veit.
88 Modern Methods of Treating Epilepsy. (Einige neuere Methoden der Epilepsiebehandlung.) A. Eulenburg.
89 *Chemical, Physical and Morphologic Findings in 240 Spinal Punctures and their Interpretation for Diagnosis and Treatment. (240 Spinalpunktionen.) W. Cimbal.
90 *Suggestion for Internal Treatment of Acute Peritonitis after Appendicitis. (Peritonitis nach Perityphlitis.) M. Katzenstein.
91 *Abortive Treatment of Cold in the Head with Atropin. (Atropinbehandlung des Schnupfens.) O. Kohnstamm.

81. **Pylorospasm.**—Heubner states that he has observed 49 cases of spasmodic contraction of the pylorus in 10,000 children with various affections in his charge. He has been able to trace the after-life of 18 of the children with pylorospasm in infancy. In one family 3 children died in infancy from the results of pylorospasm. All the other children recovered under exclusively dietetic measures. He leaves the stomach at rest, refraining from lavage, and making the intervals between feedings as long as possible, but then allowing the child to drink freely and to vomit afterward. He also orders warm cataplasms or the thermophor to the stomach, but never counter-irritation. Opium or atropin, to subdue the contraction, he prefers to give by the rectum, and supplements all these procedures by a high enema of tepid water once a day, hoping that the warmth from this source will aid in subduing the contraction of the stomach. The condition may persist for weeks and months, reducing the strength of the little patient, but even then, he declares, conditions are not so bad as after a gastroenterostomy. This operation does not inevitably cure the spasm, while the mortality has been 50 per cent. in this class of cases. Expectant dietetic treatment has only a mortality of 9.5 per cent. to date. In all his cases the final tendency toward recovery was never later in making its appearance than the end of the third month of life. In general, the upward trend was evident within one or two weeks. In later life four of the children exhibited a tendency to nervous troubles, but all the others of whom he has knowledge are in excellent health.

82. **Physical Disturbances in Hysteria and Their Importance for Treatment.**—Curschmann advises closer study of the sensory and motor disturbances in hysterics, saying that careful analysis of their origin and mechanism will often point the way to diagnosis and cure. As the motor or sensory troubles are cured, the general hysteria subsides.

87. **Prognosis and Treatment of Tuberculosis in Pregnant Women.**—Veit comments on the fact that the pregnant woman, as a rule, gains in weight more than is explained by the growth of the ovum. Not only the cells of the fetus, but the cells of the maternal organism, under the influence of the growing ovum, acquire the faculty of increased assimilation. The tuberculous woman, he says, may present this same phenomenon when she becomes pregnant, or she may show a progressive decline in weight owing to the progression of the tuberculous affection. In the latter case she is doomed. In his experience women in this last class either abort or die soon after delivery. Between these two groups is a third group in which the weight fluctuates within narrow limits. His impression is that women in this group are in peril, but that they can be saved by speedy interruption of the pregnancy. By careful study of the weight he thinks that it is thus possible to foretell the outcome when a tuberculous woman becomes pregnant. Those who gain steadily in weight come through the ordeal unimpaired. Those who lose steadily are doomed, while those whose weight remains stationary or fluctuates a little are in grave peril. He has not had sufficient experience to determine the standards for weekly increase in weight during pregnancy. When the woman is first seen she is weighed. Then he gives an ounce of castor oil and the next morning the intestines are thoroughly rinsed out, the bladder emptied, and the woman is weighed fasting. Afterward she can eat and drink as she will, but must not exert herself—he prefers to have her stay in bed. Daily, after evacuation of the bladder, she is weighed again, fasting, but without a purgative, and again after one week she is given the same dose of castor oil and weighed again, and the findings are compared with those of the first weighing. In some dubious cases he has kept this observation up for weeks before formulating his final decision as to the indications.

89. **Lumbar Puncture.**—Cimbal relates the findings in the cerebrospinal fluid obtained by 240 punctures in 14 persons with various functional psychoses or intoxications, but otherwise healthy; also in 12 cases of paralysis; in 12 of paralysis from syphilis of the brain; in 13 cases of tumors of the brain, chorea, eclampsia or similar conditions; in 12 of cerebral hemorrhage, and in 14 of meningitis. He found that the chemical, physical and microscopic findings varied widely in different cases of the same affections, imposing great caution in deductions from them. The findings in the spinal fluid can not be accepted as an index of the composition of the whole mass of the cerebrospinal fluid. In one case the fluid in the fourth ventricle was found to differ widely from that obtained by lumbar puncture. The stage of the affection and the prognosis are indicated better by the chemical findings than by the findings in regard to the cells found in the fluid. The chemical findings are generally the same for both tuberculous meningitis and syphilis of the brain. The increased proportions of salt and albumin point to severe alterations. In conclusion he calls attention to the regular and strikingly favorably influence of lumbar puncture in severe cases of alcohol intoxication —delirium tremens—in his experience.

90. **Suggestion for Internal Treatment of Acute Peritonitis After Appendicitis.**—Katzenstein's suggestion applies only to severe cases. It is based on his discovery that the walls of a cavity, the seat of an effusion, especially if hemorrhagic, become coated with fibrin. This fibrin clogs the passages for absorption of the fluid and there is little or no absorption. In case of peritonitis the gradual invasion of the peritoneum by bacteria causes a copious effusion, rich in fibrin, which becomes deposited on the walls and impedes absorption. When the invasion of the peritoneum occurs suddenly, especially when the blood is thicker than usual from any cause, then there is little effusion and no deposits of fibrin, consequently absorption proceeds unhindered. This explains the acute intoxication of the organism in a few hours, the result of unimpeded absorption of the bacterial toxins. For these reasons he has been applying in otherwise doomed cases of peritonitis a procedure which J. Wernitz has found extremely useful in cases of puerperal sepsis. (Described in THE JOURNAL, Vol. XL, pages 745 and 813, 1903.) Katzenstein modifies the technic somewhat to refrain from exciting peristalsis. Four gm. (60 grains) of salt are dissolved in a pint of warm water (40 C., 104 F.). This fluid is allowed to flow into the rectum at the rate of one or two drops a second, no faster. The fluid is renewed and the procedure continued until 2 or 3 quarts have thus been passed into the rectum, allowing one or two hours to each pint. After 12 hours the procedure is repeated. The patient thus receives from 4 to 6 quarts of the fluid in 24 hours, and soon shows great benefit from it, while peristalsis is scarcely at all excited. Any masses of feces in the rectum are, of course, softened and expelled. He has thus treated 3 patients who, he is convinced, could not have recovered without this saving measure. A major operation in these cases would certainly have extinguished the last spark of life by heart failure. Two patients were children, the other was a man of 40. Zollikofer has recently reported the recovery of twenty-six patients with appendicitis treated on this same principle with no mortality, but Katzenstein is an advocate of operative treatment as a rule, and advises the above technic only when other measures are contraindicated.

91. **Abortion of a Cold with Atropin.**—Kohnstamm has found in his own person and in the clinic that atropin is able to abort a cold. The dose required ranges between 0.5 and 1.5 mg. (1/150 to 1/60 of a grain). This amount of atropin sulphate is dissolved in a glass of water and the whole sipped in the course of an hour. By the end of an hour or two all symptoms have vanished. If they reappear the next day he repeats the dose. He has found the same measure useful in a case of nervous rhinorrhea which is always promptly arrested by this dose. As the catarrhal secretion subsides under the influence of the atropin, the general symptoms vanish with it.

Zeitschrift f. Geb. und Gyn., Stuttgart.

Last indexed, page 1643.

92 (LIX, No. 3, pp. 385-580.) Stratified Pavement Epithelium in Surface of Uterine Mucosa. Its Innocent and Malignant Character. Cancer Variation. (Mehrschichtiges Plattenepithel. Kaufmann-Hofmeiersche Krebsvariation.) A. Sitzenfrey.

93 *Operative Treatment of Vesicovaginal Fistula, especially in case of Loss of Urethra and Neck of Bladder. (Blasenscheidenfisteln.) O. v. Franqué.

94 *Etiology of Chorioepithelioma without a Primary Tumor in Uterus. (Aetiologie der Chorionepithelíome.) M. Walthard.

95 *Vanishing of a Pregnancy. (Beitrag zur Lehre von der Blasenmole.) O. Polano.

96 *Study of Recurrences after Removal of Carcinomatous Uterus and Treatment of Inoperable Uterine Cancer. (Rezidive und inop. Uteruskarzinom.) M. Henkel.

93. **Operative Treatment of Vesicovaginal Fistula.**—In the 12 cases of vesicovaginal fistula in which von Franqué has operated, nothing was left of the urethra or neck of the bladder in 6 instances. The particulars of these cases and the technic followed are given in detail. In one case in which there was both rectovaginal and vesicovaginal fistulas he used a flap from the rear wall of the vagina to repair the defect and to make a new urethra. The rest of the rear wall of the vagina was sutured to the posterior lip of the os uteri and the rest of the front wall of the vagina was sutured to the anterior lip. The functions of vagina and uterus were not interfered with. The principle is similar to that followed by Cazin in a similar case. In other cases von Franqué followed Freund's technic, using the uterus to repair the breach, and commends it as admirably adapted for cases of extensive defect with complete loss of the neck of the bladder, unless the patients are very anxious to retain the genital functions. He thinks that it is not necessary to restrict this technic to incurable atresia of the uterus, but that it can be applied in any case, even with still functioning uterus, by making a new opening into the uterus in the fundus. Direct transverse union of the neck of the bladder and the remains of the urethra should be given the preference, but when this is impossible, or has failed, the Freund technic will be found most excellent.

94. **Chorioepithelioma Without Primary Tumor in Uterus.**—Walthard's patient was a v-para of 27 in the second half of an apparently normal pregnancy, with delivery of a living child. She entered the hospital on account of uterine hemorrhage at the eighth month, and two small polypous tumors were found in the vagina and removed. They were found to be metastases of chorioepithelioma. To prevent further dissemination of the malignant affection the woman was delivered by Cesarean section, followed by total extirpation of the uterus. The child died in a few days. After seven months the patient returned on account of pain in the left side, spreading to the kidney region and groin, accompanied by hematuria, and she soon died. No traces of chorioepithelioma had been found in the uterus or placenta when removed, but numerous metastases, similar to those first found in the vagina, were discovered in the kidneys, lungs and elsewhere. He accepts the case as demonstrating that fatal chorioepithelioma can proceed from a uterus which contains nothing to indicate any special proliferating energy on the part of the cells of the placenta.

95. **Vanishing of a Pregnancy.**—In the case related by Polano, bilateral ovariotomy at the fourth month of a pregnancy was followed by the entire vanishing of the pregnancy without expulsion of any parts of the ovum. The findings in the ovaries indicated an excessive reaction to an abnormal pregnancy. He theorizes to explain the facts, suggesting a possible autolysis on the part of some of the fetal elements. He was able to demonstrate this with elements of a hydatidiform mole.

96. **Outlook for Cancer of the Uterus.**—Henkel's article issues from Olshausen's gynecologic clinic at Berlin, and gives a tabulated résumé of all operations undertaken for recurrence after removal of cancer of the uterus, with the methods followed with inoperable cancer. Instead of wasting time on theoretical considerations in regard to recurrence in the glands, etc., Henkel has made a systematic study of every case of recurrence, and has learned several important points. In the first place, every woman who has had a cancer removed is instructed to return to the clinic for re-examination every ten or fourteen days. Every three months used to be the rule, but it was found that this was not often enough, as large cancerous infiltrates are liable to develop in the course of a few weeks, and when the woman notices hemorrhages or discharge, the trouble is generally too far advanced for successful intervention. The experiences at the clinic upset the notion that recurrence in a gland is a frequent occurrence. On the contrary, the recurrence was at the site of the original cancer in 90 per cent. of all cases. This may be due to particles of the cancer being taken up by the lymph, and then being deposited again from the lymph at the site of the wound. It has been the general experience that the lymph always pours out into the wound after an operation. For this reason Henkel urges extreme care in operating not to allow particles of the cancer to be forced up into the lymph vessels. This assumption may also explain the results which follow the use of the actual cautery in excising cancer. As the orifices of the lymph vessels are seared by the heat, they are occluded and cancer particles are not taken up, or, if taken up, can not be floated out again into the open wound left by the excision. Daily experience at the clinic has shown that metastatic involvement of the glands is liable to retrogress completely after removal of the primary tumor and the patient is freed permanently from the malignant disease. It is considered at this clinic that the best and surest means to reduce the mortality from cancer is by careful training of medical students in the recognition of malignant disease. Patients with inoperable cancer are anesthetized before the students examine them. Unless the patient is thus anesthetized she finds examination annoying and painful, and the students are unable to obtain an accurate idea of the characteristics of the growth. It has been found that hard cancers display a less malignant course and are less likely to recur than those with extensive lymphatic connections and where there is a tendency to hypertrophy and hyperplasia of the lymphatic apparatus, as in case of pregnancy. Sciatica after removal of a cancer is very suggestive of recurring trouble. In every such case at the clinic the recurrence was not long in making itself objectively manifest. In one case, neuralgia in the brachial plexus was the first symptom to attract attention to recurrence of a mammary cancer. In case of recurrence a single cauterization or operation is not enough. Intervention should be repeated again and again as needed. Metastases in the vagina should be excised and the inguinal glands watched. Olshausen classifies cases of uterine cancer in 5 groups according to the prognosis. These "prognosis figures" are: 1. Incipient carcinoma, restricted to one lip of the os uteri or, if in the cervix, small and superficial. 2. More advanced, but still restricted to the uterus. 3. More advanced, but removal into sound tissue practicable. 4. Removal leaves a suspicion that some cancer elements have been left. 5. Incomplete operations leaving cancer tissue. The tabulated details of operations for recurrence during the last 4 years fill nearly three pages. It is noteworthy that the operations for recurrence are fewer in number with each year that passes—only 8 in 1906, and 39 in 1902.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interest of our readers.

DIAGNOSIS AND MODERN TREATMENT OF PULMONARY CONSUMPTION, With Special Reference to the Early Recognition and Permanent Arrest of the Disease. By Arthur Latham, M.A., M.D., Oxon., etc., Physician and Lecturer on Medicine at St. George's Hospital. Cloth. Pp. 257. Price, $2.00. New York: William Wood & Co., 1907.

THIRTY-FIFTH ANNUAL REPORT of the Board of Directors of the Zoological Society of Philadelphia. (Incorporated March 21, 1859.) Read at the Annual Meeting of the Members and Loan-holders of the Society, April 25, 1907. Paper. Pp. 37. Philadelphia: Press of Allen, Lane & Scott, 1907.

DISEASES OF WOMEN. A Clinical Guide to their Diagnosis and Treatment. By George Ernest Herman, M.B., Lond., F.R.C.P., Consulting Obstetric Physician to the London Hospital. With 265 Illustrations. Pp. 900. Price, $5.00. New York: William Wood & Co., 1907.

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